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ABSTRACT

This volume primarily contains the detailed reports of the subcommittees on physician manpower, foreign medical graduates, financing of graduate medical education, and minority representation in medicine. Detailed background information and considerations used by the subcommittee in developing the conclusions and recommendations are provided. Comments by individual Council members and a cross-reference display of the Council's conclusions and recommendations are also included. The three appendices offer: an executive summary from Volume I of the first report of the Council; a summary of public hearing, November 19-20, 1987 and a glossary of 46 key terms. (SM)

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COUNCIL ON GRADUATE MEDICAL EDUCATION

FIRST REPORT OF THE COUNCIL

VOLUME II

July 1, 1988

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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Health Resources and Services Administration
Bureau of Health Professions
Division of Medicine

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Council on Graduate Medical Education and do not
necessarily represent the views of the
Health Resources and Services Administration
nor the U.S. Government

Charge to the Council

Title VII of the Public Health Service Act in Section 799 (H), as amended by Public Law 99-272, required that the Council on Graduate Medical Education provide advice and make recommendations to the Secretary and to the Committees on Labor and Human Resources, and on Finance of the Senate and the Committees on Energy and Commerce, and on Ways and Means of the House of Representatives, with respect to:

(A) the supply and distribution of physicians in the United States;
(B) current and future shortages or excesses of physicians in medical and surgical specialties and subspecialties;
(C) issues relating to foreign medical school graduates;
(D) appropriate Federal policies with respect to the matters specified in (A), (B), and (C) above, including policies concerning changes in the financing of undergraduate and graduate medical education programs and changes in the types of medical education training in graduate medical education programs;
(E) appropriate efforts to be carried out by hospitals, schools of medicine, schools of osteopathy, and accrediting bodies with respect to the matters specified in (A), (B), and (C) above, including efforts for changes in undergraduate and graduate medical education programs; and
(F) deficiencies in, and needs for improvements in, existing data bases concerning the supply and distribution of, and postgraduate training programs for, physicians in the United States and steps that should be taken to eliminate those deficiencies.

The Council is to encourage entities providing graduate medical education to conduct activities to voluntarily achieve the recommendations of this Council under paragraph (E) above.

Acknowledgement

The preparation of this Volume of the First Report of the Council on Graduate Medical Education (COGME) was assisted greatly by staff in the Health Resources and Services Administration. Paul M. Schwab, Deputy Director, Bureau of Health Professions (BHPr), served as Executive Secretary to the Council. F. Lawrence Clare, M.D., M.P.H., Director of the Office of Graduate Medical Education and Data Analysis of the Division of Medicine, BHPr, served as Program Staff Coordinator to COGME.

Although the Council members accept all responsibility for this report, the following professional staff members of the Division of Medicine should be cited for their special contributions to this effort: Donald L. Weaver, M.D., Director of the Division of Medicine; Jerald Katzoff, Staff Liaison to the Physician Manpower Subcommittee; Magdalena Miranda, Staff Liaison to the Foreign Medical Graduates Subcommittee; F. Lawrence Clare, M.D., M.P.H., Staff Liaison to the Graduate Medical Education Programs and Financing Subcommittee; and Idelle P. Smith, M.S.W., M.P.H., Staff Liaison to the Minority Representation in Medicine Subcommittee. Other important professional staff contributions from the Division were made by Brenda Selser, Sharley L. Chen, Ronald L. Craig, James M. Cultice, Hannah Davis, and Patsy McLain.

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Introduction

This document represents the second volume of the First Report of the Council on Graduate Medical Education (COGME) to the Secretary of the Department and four committees of the Congress.

Volume I contains the final conclusions and recommendations on issues related to physician manpower, foreign medical graduates, financing of graduate medical education (GME), and minority representation in medicine. Volume II primarily contains the reports of the subcommittees for each of those areas. Although individual chapters exhibit some variation in format, the reports provide detailed background information and considerations used by the subcommittees in developing their conclusions and recommendations. These conclusions, recommendations, supporting evidence and rationale, as completed in the final subcommittee meetings of February 17, 1988, were the basis for the final conclusions and recommendations of the Council which were approved in Plenary sessions of May 2-3, 1988.

In addition to the subcommittee reports, Volume II provides the comments of individual Council members and a cross-reference display of the Council's conclusions and recommendations in Volume I with those presented in subcommittee reports in this volume.

The Appendices in this Volume include the Executive Summary of the First Report from Volume I, the summary of the Council's public hearing held on November 19-20, 1987, in Bethesda, Maryland, and the Glossary of Key Terms from Volume I with slight additions.

Comments of Individual Members

INDIVIDUAL COMMENTARY

James A. Pittman, Jr., M.D.
COGME Member

I disagree with COGME's position that it is unethical to give U.S. citizens who are graduates of U.S. LCME-accredited medical schools preferential access to U.S. positions in graduate medical education. Graduate medical education is an extension of medical school education and need not exist for any other purpose, notwithstanding the fact that some institutions have come to depend upon the service component of housestaff. There is no *educational* purpose in relation to U.S. medical schools to have more resident positions than there are U.S. medical school graduates, unless we specifically wish to educate foreign physicians (which I strongly favor).

The COGME position is idealistic and does not present a problem to U.S. medical graduates at present because of the larger number of GME openings than number of USMGs. However, as COGME warns (Conclusion E-1) and as is generally held in concern, support for financing GME is eroding as payments for patient care move to negotiated fixed-price systems and become further constrained. If in the future funds from patient care become so constrained as to be insufficient to maintain positions in excess of the number of graduates from U.S. LCME-accredited medical schools, some system should be devised to assure that those U.S. medical students who have successfully completed the "undergraduate" portion of their medical educations can complete the last portion (usually the final 20 percent) in order to become licensable to practice medicine. The simplest, and perhaps the fairest, system in such an event would be a permissive one; i.e., one which would not preclude appointment of FMGs to GME programs, but also would not require that federal funds (Medicare/Medicaid) be used to pay FMGs indiscriminately but would require that such funds be used preferentially to pay U.S. medical graduates.

JPittman

James A. Pittman, Jr., M.D. 1 June 1988

Individual Commentary
C. Ross Anthony, Ph.D.
David N. Sundwall, M.D.
COGME Members

As representatives of the Department of Health and Human Services (DHHS), we believe that this first report of the Council on Graduate Medical Education (COGME) presents a good, comprehensive statement on issues related to undergraduate and graduate medical education.

We generally support the principles which have been adopted by the Council, and which guided the preparation of this report. In particular, we are pleased that the Council has recognized the importance of private sector contributions to solving these problems. In addition, in designing their recommendations, the Council has shown concern about the effects on total health care costs, and on the Federal budget.

We agree with their findings in a number of areas. With regard to the supply of primary care physicians, for example, they conclude that there is an undersupply of certain primary care physicians together with an oversupply of some non-primary care specialists. We support Recommendation 12 that medical school graduates should be strongly encouraged to enter training in primary care, particularly in family practice and general internal medicine. The general areas of geriatrics and preventive medicine should also be emphasized.

Similarly, we support the findings with regard to minority representation in medicine. It is clear that there is still underrepresentation of minority physicians in the U.S., and that creative efforts need to be undertaken by government, private industry, and the educational community to increase the number of underrepresented minority applicants qualified to enter and complete a medical education.

We think the Council report is correct in finding that graduate medical education in ambulatory settings is increasingly necessary in many specialties for optimal training and preparation for practice. The Council recommends that a concerted emphasis on training in ambulatory settings is warranted.

We also believe the Council's analysis and recommendations on foreign medical graduates is a thoughtful examination of the issue.

Although we support the majority of the conclusions and recommendations, there are some areas of the report that warrant further consideration. As representatives of the Department, we want to state for the record the Administration's position on certain items. In particular, we are concerned about two areas of emphasis: (1) the nature of future Federal support of health professions education; and (2) financing of graduate medical education, particularly by Medicare.

With regard to the future Federal role in providing support for health professions education, the Administration has consistently testified that the current categorical authorities in Titles VII and VIII of the Public Health Service Act should not be reauthorized as such. The report, in contrast, recommends expansion of some of those categorical authorities. We believe this system of categorical authorities severely constrains our ability to target the limited resources available for health professions training on the areas of greatest need.

The Administration has proposed legislation to replace these specific authorities with a new discretionary authority for "Cooperative Health Professions Initiatives." Under this new authority, the Secretary could make grants to, or enter into cooperative agreements with, States and public or private entities to provide support for projects designed to meet high priority health personnel needs. Funds might be used, for example, to improve the supply and distribution of primary care providers, strengthen geriatric training, or provide training related to emerging health care problems such as AIDS.

The new program would provide the flexibility needed to encourage States and public and private entities to enter into cooperative arrangements to address health professions problems, as well as to contribute their own funds to the solution of these problems.

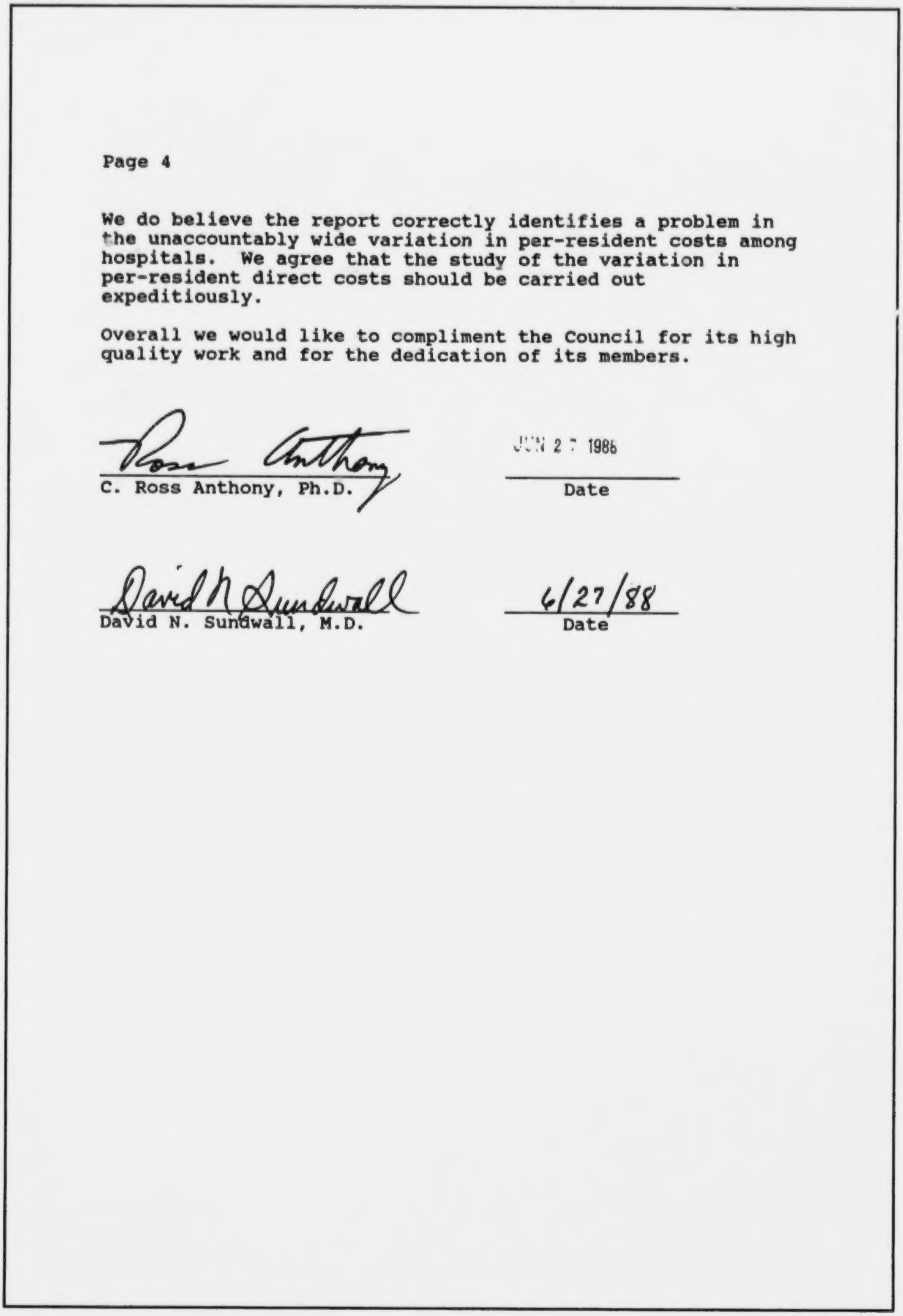
A second area of concern has to do with the report's section on financing graduate medical education (Section E). The report reviews Medicare payments for direct medical education, such as resident salaries, fringe benefits, and faculty salaries, as well as for indirect medical education, which are payments for the purported higher costs generated from more complex cases in teaching hospitals and for the additional lab tests ordered by graduate medical students.

It is estimated that in 1988 Medicare will spend $975 million on its proportionate share of direct costs for graduate medical education, and another $2 billion on the indirect teaching adjustment in 1988.

The report recommends that funds to finance graduate medical education should continue to come from present sources, and recommends against making any major and/or precipitous changes in the way in which graduate medical education is financed (Recommendation (13)). Recommendation 15 states that: "Until further data and analysis are available on the potential effect of reduced Medicare GME payments on teaching hospitals and training programs, the Council recommends that (1) aggregate level of payments for GME be maintained at current levels and (2) payments for direct GME costs continue to include all expense categories currently allowed."

The Administration believes that Medicare should pay for the services provided to Medicare beneficiaries while maintaining its role as a fiduciary agent for the program. Therefore, the Reagan Administration has proposed legislation for some years that Medicare under the direct medical education subsidy pay only for the services provided by residents (which would include residents' salaries and fringe benefits) and not pay for other program expenses (which include classroom and teaching facility expenses). This would result in a reduction in payments for direct medical education.

The Administration has also proposed a reduction in the factor used to calculate the indirect medical education payment. Originally, an indirect medical education factor was generated by a statistical analysis to reflect the impact of indirect medical education on hospital expenses. The factor, which currently stands at 8.1 percent, is scheduled under OBRA 1987 to decrease to 7.6 percent in 1989. We have proposed reducing this adjustment factor to the 4.05 percent factor generated by the statistical analysis. Reducing the adjustment factor to 4.05 percent would result in payments that more accurately reflect the estimated effect of teaching programs on average operating costs per case.



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We do believe the report correctly identifies a problem in the unaccountably wide variation in per-resident costs among hospitals. We agree that the study of the variation in per-resident direct costs should be carried out expeditiously.

Overall we would like to compliment the Council for its high quality work and for the dedication of its members.

Ross Anthony

C. Ross Anthony, Ph.D.

JUN 27 1988

Date

David N Sundwall

David N. Sundwall, M.D.

6/27/88

Date

Cross Reference of Conclusions and Recommendations

Volume I of the First Report of the Council on Graduate Medical Education presents the final conclusions and recommendations as formally approved by the Council. The final decisions made by the Council were based on conclusions and recommendations presented by the subcommittees in their final reports. Volume II presents the subcommittee reports, as well as the Executive Summary of Volume I. The following Cross Reference relates the conclusions and recommendations presented in Volume I with those in the Subcommittee Reports.

Cross Reference of COGME Conclusions

	COGME Subcommittee Conclusions			
COGME Conclusions (Volume I)	Physician Manpower (Volume II)	Foreign Medical Graduates (Volume II)	GME Programs and Financing (Volume II)	Minority Representation in Medicine (Volume II)
Physician Supply in the Aggregate				
A-1	A-1, A-2			
A-2	A-3			
Geographic Distribution of Physicians				
B-1	C-1			
B-2	C-2			
B-3	C-2			
Minority Representation in Medicine				
C-1				A
C-2				B
Volume II only				C
Volume II only				D
Primary Care and Other Physician Specialties				
D-1	B-1			
D-2	B-2			
D-3	B-3			
D-4	B-4			
D-5 .... Volume I only				
Financing GME				
E-1			A-1	
E-2			B-1	
E-3			B-1	
E-4			B-1	
E-5			B-2	
Medicare Financing of Direct and Indirect Costs of GME				
F-1			C-1	
F-2			C-2	
FMGs and Access to GME				
G-1		A-1		
G-2		A-2		
G-3		A-3		
G-4		A-4		
G-5		B-1		
G-6		C-1		
G-7		D-1		
G-8		D-2		
FMGs and International Relations				
H-1		E-1		
H-2		E-2		
H-3		E-3		
Structure and Content of Medical Education				
I-1			D-1	
I-2		D-3		
I-3 .... Volume I only				
Volume II only			E-1	
Data and Research Issues				
J-1 .... Volume I only				

Cross Reference of COGME Recommendations

COGME Recommendations (Volume I)	COGME Subcommittee Recommendations			
	Physician Manpower (Volume II)	Foreign Medical Graduates (Volume II)	GME Programs and Financing (Volume II)	Minority Representation in Medicine (Volume II)
Physician Supply in the Aggregate				
1	1			
2	2			
3	1			
Geographic Distribution of Physicians				
4	6			
5	7			
Minority Representation in Medicine				
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39 Volume I only				
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41 Volume I only				
Volume II only			11	
Data and Research Issues				
42 Volume I only				
43 Volume I only				
44 Volume I only				

Report of the Subcommittee on Physician Manpower

INTRODUCTION

Charge

The general charge of the Subcommittee on Physician Manpower (the Subcommittee) was to examine the adequacy of the Nation's physician supply in order to identify current and future shortages or excesses by specialty. The Subcommittee was also charged to identify policies to be implemented in the public and private sectors in light of its conclusions.

Issues

To focus its efforts for the first report to Congress and the Secretary, the Subcommittee listed a number of issues for consideration. It addressed the issues in whole or in part as time and information permitted. The issues, listed below, were also helpful in identifying data inadequacies and research needs. Those receiving emphasis in the first report are marked here with an asterisk.

*1. Assuming a continuation of current policies and present trends, what conclusions can be drawn about the adequacy of the expected supply of physicians over the next two decades?
   *a. in the aggregate?
   *b. for primary care physicians?
   c. by specialty?

2. What conclusions can be drawn about the effects of new technologies, scientific breakthroughs, new diseases, and demographic changes on the demand for physician manpower? Furthermore, what conclusions can be drawn about the effects of changes in the areas of geriatrics and long-term care on the demand for physician manpower?

*3. What conclusions can be drawn about the cost impact of medical education on the number of qualified students seeking such an education, particularly those from underrepresented groups?

*4. What policy changes in the public and private sectors are recommended to deal with any projected imbalances in the physician supply? What is the relative role of marketplace versus other initiatives to remedy these imbalances?

5. What impact will these recommendations have on:
   a. the quality of health care?
   b. health care costs?
   c. access to health care?
   d. minority representation in the medical profession?
   e. physician function?

6. To what extent can the goals of quality, affordability, and accessibility of health care be achieved by substituting nonphysician providers for physicians?

*7. Is it desirable to create a buffer to avoid rapid swings in physician supply? If so, how can this be achieved?

*8. To what extent can the above issues be addressed and resolved in time for the first report, given the adequacy of studies and data presently/potentially available for the Physician Manpower Subcommittee to draw conclusions and make recommendations about the adequacy of the expected supply of physicians?

Strategy

The Subcommittee's first major task was to identify its approach to assessing physician imbalances. There were budgetary, operational, and technical limitations to what could be considered in preparing this report. The short time available for analysis also placed a limitation on the amount of new or quantitative modeling or estimation that could be undertaken. A related issue was which specialties the Subcommittee would undertake to assess for excess or shortage of supply.

To help address these issues and develop its conclusions, three short-term studies were commissioned. The first, prepared by staff of Project HOPE's Center for Health Affairs, provided background on recent, ongoing, and planned studies that assess physician specialty imbalances, and presented the Subcommittee with short-term options for addressing related questions.[1] The second commissioned paper, prepared by Jack Hadley, Ph.D., of Georgetown University, offered critiques and observations of the Project HOPE analysis as well as views regarding longer term options for specialty assessment.[2] After the Subcommittee determined the approaches it would use, it commissioned as a third paper a detailed set of tables and analyses for assessing the adequacy of physician supply.[3] This task was also carried out by Project HOPE.

During its deliberations, the Subcommittee requested and benefited from many presentations by individuals and organizations concerned with and expert in many facets of physician manpower. In addition, the Subcommittee received oral and written testimony from several organizations and individuals at the public hearing in November 1987. The commissioned studies, as well as the expert testimony, contributed greatly to the Subcommittee's work and product.

The presentations made to the Subcommittee are shown on the following page.

CONCLUSIONS AND RECOMMENDATIONS

The conclusions and recommendations presented below are the result of Subcommittee deliberations through mid-February 1988,

PRESENTATIONS MADE TO THE SUBCOMMITTEE ON PHYSICIAN MANPOWER

Presenter	*Topic*
March 17, 1987	
James Cultice Bureau of Health Professions	Modeling of Physician Supply and Graduate Medical Education
Jerald Katzoff Bureau of Health Professions	Physician Requirements: Background and Issues Requirements Model of Graduate Medical Education National Advisory Committee
John Drabek, Ph.D. Bureau of Health Professions	Bureau Physician Requirements Model
August C. Swanson, M.D. Association of American Medical Colleges	Status of Undergraduate Medical Education
James Rodgers, Ph.D. Roy Schwarz, M.D. American Medical Association	Trends in Physician Supply
Douglas Ward, Ph.D. American Osteopathic Association	Osteopathic Physician Supply
William F. Donaldson, M.D. Council of Medical Specialty Societies	Developments in Assessing Physician Supply
June 29, 1987	
Louis Garrison, Ph.D. Project HOPE	Options for Assessing Adequacy of Physician Supply
Jack Hadley, Ph.D. Georgetown University	Critique of Options for Assessing Adequacy of Physician Supply
Marjorie Bowman, M.D. Bowman Gray School of Medicine (representing American Academy of Family Physicians)	Assessment of Adequacy of Family Medicine Supply
Warren Tingley, M.D. American Society of Internal Medicine	Trends in Internal Medicine Manpower Supply
Antoinette Eaton, M.D. Columbus Children's Hospital (representing the American Academy of Pediatrics)	Assessment of Adequacy of Pediatric Medicine
George Sheldon, M.D. University of North Carolina at Chapel Hill Glen Misek American College of Surgeons	Trends in General Surgery Supply
Howard Stambler Bureau of Health Professions	Trends and Status of Geographic Distribution of Physicians
Cherry Y. Tsutsumida Bureau of Health Professions	The Area Health Education Center (AHEC)
Jeffrey Human Bureau of Health Care Delivery and Assistance	The National Health Service Corps
William J. Holland Bureau of Health Professions	Status of Minority Physicians in Delivery of Health Care
Edward N. Brandt, Jr., M.D., Ph.D. University of Maryland	Physician Manpower Needs in the Military
August 28, 1987	
Jack Carow Council of Medical Specialty Societies	Physician Manpower Supply Matrix
Louis P. Garrison, Jr., Ph.D. Peter J. Neumann, M.A. Julie A. Schoenman, Ph.D. Project HOPE	Tables and Analyses for Assessing Adequacy of Physician Supply

and are the versions approved by the Subcommittee at its last meeting on February 17. This report does not reflect final revisions made by the Council in its plenary sessions subsequent to that date.

A. PHYSICIAN SUPPLY IN THE AGGREGATE

In approaching its task, the Subcommittee first considered questions regarding the adequacy of physician supply in the aggregate. This assessment was based on the continuation of current national and State policies and present trends affecting the U.S. health care system.

> *CONCLUSION A-1. GIVEN THE ASSUMPTIONS OF EXISTING STUDIES AND TESTIMONY PRESENTED, THERE NOW IS OR SOON WILL BE AN OVERSUPPLY OF PHYSICIANS IN THE U.S.*

The Subcommittee concluded that given the current patterns, technology, and economics of medical practice in the United States, there now is or soon will be an aggregate oversupply of physicians. This conclusion is supported by projected estimates of physician requirements and supply developed by the Health Resources and Services Administration (HRSA), Bureau of Health Professions (BHPr), as well as a limited reevaluation of the conclusions of the Graduate Medical Education National Advisory Committee (GMENAC).

BHPr, using a demand/utilization approach for estimating future manpower requirements, projects an oversupply of physicians in the aggregate. It estimates that the oversupply will be more than 26,000 by 1990 and will increase to nearly 72,000 by the year 2000 (Table 1).[4]

Conclusions of a physician oversupply made by GMENAC nearly eight years ago are also applicable.[3,5] In 1980, using the results of both its supply model and its adjusted-needs based requirements model, GMENAC projected a physician oversupply of 69,750 for the year 1990 and 144,700 for the year 2000. The model was later revised for a more accurate projection of 1990 requirements for six specialties that had not been modeled in the original GMENAC report. The revised GMENAC requirements projection yielded an oversupply of nearly 63,000 for 1990. Extrapolating the 1990 estimate to 2000, based on projected population growth, yielded an oversupply of approximately 137,000 in the year 2000.[6]

The number of physicians in graduate medical education (GME) programs is an indication of the number entering the U.S. physician manpower pool. GMENAC's projections of the total number of physicians in GME programs in 1990 are consistent with observed trends during the 1980s. Assuming that the adjusted-needs projections for 1990 developed by GMENAC are valid, the results are consistent with a projected oversupply of physicians in the aggregate.

Finally, a limited analysis of physician staffing and projected growth rates in health maintenance organizations (HMOs) lends further support to the conclusion of oversupply. Several studies have suggested that fewer physicians are needed for a given population in an HMO setting than in a traditional fee-for-service

Table 1
Estimates of Supply, Requirements, and Oversupply for Physicians (M.D.s and D.O.s): 1990 and 2000

Data Source	1990			2000		
	Supply	Requirements	Oversupply	Supply	Requirements	Oversupply
BHPr	597,040	570,500	26,540	708,600	637,000	71,600
Original GMENAC	535,750	466,000	69,750	642,950	498,250	144,700
Revised GMENAC	535,750	473,000	62,750	642,950	505,750	137,200

Sources: BHPr data from HRSA, BHPr, Supply Forecasts and Requirements Estimates, 1988.[4] Original GMENAC data from GMENAC, 1981.[5] Revised GMENAC data from Bowman, *et al.*, 1983.[6]

setting. The estimates vary but the range in ratios of physicians to 100,000 population for HMOs was from 90 to 148 between 1972 and 1986 (Table 2),[7-9] while the ratio of active allopathic physicians to 100,000 population in the United States was 211 in 1985.[4]

Table 2
Suggested Optimal Physicians Per 100,000 Population Ratios in HMOs Versus Actual and Projected Ratios in U.S.

	Ratio
Suggested HMO Standard	
Mason (1972)	89.4-102.2
Scitovsky & McCall (1976)	147.9
Tarlov (1986)	120.0
Actual and Projected Active Physicians * *(M.D.s) in U.S.*	
1970	150.0
1975	169.0
1980	190.4
1985	210.9
1990	228.0
2000	249.2

* M.D.s estimated "active" from American Medical Association (AMA) "professionally active," adjusted to include approximately 90 percent of physicians whose activity status is "unclassified" and whose address is "unknown." (AMA "professionally active" is total physicians less the number of "inactive," "address unknown," and activity status "unclassified.")

Sources: Suggested HMO Standard data from Mason, Scitovsky & McCall, and Tarlov as cited in Project HOPE, Table V-1, 1987.[7-9,3] 1970-1985 M.D. data from AMA: Physician Characteristics and Distribution in the U.S. as cited in U.S. DHHS, Sixth Report, Table 3-3, 1988.[11,4] 1990-2000 M.D. data from BHPr Supply Forecasts as cited in U.S. DHHS, Sixth Report, Table 3-42, 1988.[4] Population figures from U.S. Bureau of the Census, Current Population Report P-25.

One study, using two scenarios of high and moderate HMO growth rates, concluded that GMENAC projections of an oversupply of physicians in the year 2000 could be underestimated.[9] If 60 million people were enrolled in HMOs in the year 2000, there would be an oversupply of 180,638 physicians. HMO enrollments of 120 million would imply an oversupply of 220,133 physicians in that year. These estimates exceed the GMENAC projections of oversupply by 25 and 50 percent respectively.

It should be noted that there are several caveats regarding the reliability of this approach, such as considerable variation in the estimates of physician requirements for HMO populations, the use of care outside HMOs, and the possibility that HMO enrollees are not representative of the general population. Despite these, the Subcommittee is persuaded that the HMO data support the conclusion of an oversupply.

CONCLUSION A-2. THE EXTENT OF AN OVERSUPPLY IS IMPOSSIBLE TO QUANTIFY AT THE PRESENT TIME.

Notwithstanding the general conclusion of oversupply reached by reviewing the results of these modeling efforts, the results must be interpreted with extreme caution.* Indeed, the Subcommittee has concluded that for a variety of reasons on both the supply and demand sides of the equation, it is impossible to quantify the extent of the oversupply with any reasonable degree of precision or to predict how far into the future it will persist. Variables which would affect the quantification of the extent of oversupply include the following:

- supply variables
  - (a) changes in medical and osteopathic school enrollment
  - (b) supply of foreign medical graduates (FMGs)
  - (c) increased numbers of female physicians
  - (d) changes in physician productivity
- requirements variables
  - (a) physician use rate in managed care systems
  - (b) impact of new diseases (e.g., acquired immunodeficiency syndrome (AIDS))

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* It should be further noted that not all would agree that there is an impending oversupply of physicians. An assessment that questioned the reality of such a surplus, for example, was given by Ms. Ruth Hanft at the Council's public hearing.[10] Her conclusion was based on her review of the changes that have occurred since the GMENAC report (and its conclusion of projected surplus) in the areas of physician productivity, population demographics, utilization, technology, and financing. This was coupled with her observations of the existence of unmet needs as well as the lack of evidence of physician economic dislocations that would be associated with an emerging physician surplus. She advised the Council that no deliberate effort should be made to decrease enrollment. Moreover, an analysis of market signals, such as physician fees, incomes, and rates of return to medical training, as well as indicators of productivity and work patterns, provide inconclusive results regarding the possibility of a current or emerging surplus. A recent analysis of market trends between 1975 and 1985 conducted for the Subcommittee by staff of Project HOPE does suggest that competition has had an effect on the physician market in recent years. Physicians are seeing fewer patients, waiting times are down, and physician median incomes have fallen slightly in real terms (after discounting for consumer price increases). On the other hand, physicians are maintaining their absolute and relative income superiority over other professions, despite the increasing supply.

(c) population demographics (e.g., age composition)
(d) use of other health care providers
(e) new technology
(f) insurance coverage
(g) access for underserved
(h) patterns of practice and community utilization.

The application of these and other variables in assessing the supply and requirements for physician manpower produces no consensus about the precise extent of oversupply of physician manpower. The Subcommittee has concluded that the values for many of these variables cannot be projected with quantitative precision.

The crux of the problem in this regard is the lack of accurate and consistent data on physician manpower requirements. Data and information presented to the Subcommittee by a variety of organizations and summarized in papers prepared by the staff of Project HOPE, while representing the best efforts of these entities, serve to emphasize the need for improved data in physician manpower.

There are a number of examples of why precise quantitative measurements of the supply components are uncertain and vary widely. For one, the number of first-year enrollments in allopathic and osteopathic schools declined by 2.9 percent between 1981-1982 and 1986-1987, from 19,453 to 18,880 (Table 3). BHPr assumes a further 3.2 percent decline for the 5-year period ending 1991-1992. This would consist of a 4.2 percent decline for first-year enrollments in allopathic schools and a projected 6 per cent increase for those in osteopathic schools. Yet other plausible assumptions can be made for the projected size of allopathic first-year enrollments, ranging from an Association of American Medical Colleges' (AAMC) prediction that the number may drop to as low as 13,000 in 1990 from its current 17,156, a 24 percent decline, to an assumption that final year sizes in allopathic schools will remain at current levels.[4]

As another example, the foreign-trained allopathic physician supply, made up of both U.S. citizens and foreign nationals who trained abroad and have been licensed to practice in the United States, represented 22 percent of U.S. M.D.s in 1985. In the 15-year period ending in 1985, FMGs increased by 105 percent while non-FMGs increased by only 54 percent (Table 4).[11] However, in the 15-year period ending in the year 2000, FMGs are projected to grow by 19 percent while non-FMGs are projected to increase by 34 percent.[4]

In its latest projections of physician supply (excluding exchange visitors, who are expected to return to their home countries), BHPr assumes that 3,265 FMGs will enter the physician supply each year, consistent with recent trends. This projection is from BHPr's basic series of estimates. But other plausible assumptions can be made, ranging from significant reductions in available residency positions for FMGs to further increases in the number of FMGs entering the physician supply. For example, BHPr's low estimate assumes that the number of GME positions available to both foreign national and U.S. citizen FMGs will decrease 50 percent from 1987 to 1997. BHPr's high series estimate assumes a 10 percent increase in foreign national FMGs by 1991 and stabilization at that level thereafter.

Table 3
First-Year Enrollments* at Allopathic (M.D.) and Osteopathic (D.O.) Medical Schools: 1981-1982, 1986-1987, and 1991-1992

Physician Category	1981-1982	1986-1987	1991-1992	Percent Change 1981-1982 to 1986-1987	Percent Change 1986-1987 to 1991-1992
Total	19,453	18,880	18,267	-2.9	-3.2
M.D.	17,871	17,156	16,439	-4.0	-4.2
D.O.	1,582	1,724	1,828	9.0	6.0

* M.D. first-year enrollments include students transferring from 2-year schools, from other degree programs, and from foreign medical schools.
Source: U.S. DHHS, Sixth Report, Table 3-41, 1988.[4]

Table 4
Estimated Active * Foreign Medical Graduate Physicians (M.D.s): 1970, 1985, and 2000

Physician Category	1970	1985	2000	Percent Change 1970-1985	Percent Change 1985-2000
Total Active	314,196	512,849	667,650	63.2	30.2
FMG **	55,355	113,657	134,770	105.3	18.6
Non-FMG	258,841	399,192	532,880	54.2	33.5

* Number of "professionally active" M.D.s adjusted to include proportion of "unclassified" and "address unknown."
** Includes U.S. citizen FMGs.
Sources: 1970 and 1985 Total Active and FMG data from AMA: Physician Characteristics and Distribution in the U.S., 1986, Table A-1, p. 17 and Table A-4, p. 23.[11] Formula applied to adjust AMA data to derive estimated active. 2000 Total Active and FMG data from U.S. DHHS, Sixth Report, Table 3-42, 1988.[4]

Virtually all such projection approaches are highly sensitive to assumptions about future levels of physician productivity. Freiman and Marder, for example, note that a decline of only a few hours per week in the time spent by physicians in patient care would eliminate much of the surplus projected by GMENAC. This would presumably influence the BHPr-projected oversupply in like manner.[12] As was pointed out by the AMA in written testimony for the Council's public hearing, physician productivity is affected by many factors, including the number of patient visits per week, the number of hours per week worked by physicians, the mode of health care delivery, and technical innovations.

Physician productivity is also likely to be affected by increases in the number of female physicians. Women are expected to make up 17 percent of the active 1990 physician supply, numbering about 104,000 physicians (compared with approximately 81,600 in 1986), and by 2000, to reach 23 percent of the physician supply and exceed 160,000 in number (Table 5).[4]

Table 5
Estimated Active * Physicians (M.D.s and D.O.s) by Sex: 1986, 1990, and 2000

	1986		1990		2000	
Sex	Number	Percent	Number	Percent	Number	Percent
Total Active	544,830	100.0	597,040	100.0	708,600	100.0
Male	463,180	85.0	493,540	82.7	547,470	77.3
Female	81,640	15.0	103,500	17.3	161,130	22.7

* Number of ''professionally active'' M.D.s adjusted to include proportion of ''unclassified'' and ''address unknown.''
Source: U.S. DHHS, Sixth Report, Table 3-45, 1988.[4]

Women physicians have traditionally worked fewer hours and had fewer patient visits per week than male physicians. If these differentials persist, a portion of the projected increase in physician supply will be offset by the growing proportion of female physicians.[11] Jacobsen and Rimm attempted to bring selected GMENAC assumptions into line with what they felt were changes that had occurred since the GMENAC report was issued. In adjusting GMENAC projected supply of physicians for changes in the output of GME, the increasing proportion of female physicians, and the decrease in physician productivity, they concluded that a projected oversupply of 39,000 physicians in the year 2000 does exist, albeit considerably fewer than the oversupply of 145,000 projected by GMENAC.[14]

In the area of requirements, a considerable number of organizations testifying at the public hearing reiterated the complexities and uncertainties regarding current and future assessments of need of and demand for physicians. Attention was directed to many factors that might affect such analyses, such as developments in new technology, the aging population, and implications of AIDS and other diseases that might emerge in the coming years.[15] As was pointed out in written testimony of the AMA, for example, the aging of the general population will affect the need for many types of physician services. However, greater controls on or reductions of Medicare and Medicaid payments for physician services may reduce the effective demand by the aging population. Technological innovations are also thought to have a strong impact on adequacy of physician supply, although, as pointed out by the AMA, it is difficult to predict what the net effect of these innovations will be.[13]

Others have noted the difficulty of predicting requirements. Harris pointed out, for example, that the GMENAC panels could not foresee such changes as the increase in cesarean sections, the rise in liver transplants, and cardiologists' use of streptokinase to dissolve blood clots. While each change in technology might have a small effect on the aggregate requirement for physician services, the combined effect of many such changes could be substantial. Harris and others have noted that when GMENAC issued its report in 1980, the existence of AIDS had not been reported.[16] This will obviously change predictions of physician requirements (although the extent of its impact on physician versus nonphysician requirements could be much debated).

Such uncertainties extend to prepaid and corporate medical care systems. As stated earlier, the few analyses of physician staffing that do exist are generally consistent with the view that adequate care can be provided with fewer physicians than are used on average in this country, although the size of the differential is unclear, as is the extent to which individuals and families will enroll in prepaid health care systems for their medical care. Kallenberg, *et al.*, noted that the movement toward prepaid and corporate medical care delivery systems in which physicians are salaried employees may further accelerate the trend toward a reduction in the average physician's number of patient-contact hours. However, they also point out that as delivery of medical care evolves into larger and more corporately organized systems, new and expanded demands on physicians' time will occur. For example, they note that cost control, quality assurance, peer review, and time-consuming communication and documentation of care become more important in large health care organizations. Thus, although the overall system may be more efficient, the amount of physician time spent on patient care and administrative activities combined may actually increase. Kallenberg, *et al.*, state that ''conclusions about the overall effects of such new systems of health care delivery on physician productivity and projected physician requirements are still far from clear. Estimates vary from a 40 percent increase to an 80 percent decrease in forecasted surpluses.''[17]

> *CONCLUSION A-3. THERE IS CONFLICTING EVIDENCE WHETHER THE INCREASING PHYSICIAN SUPPLY, WHICH THE COUNCIL HAS DETERMINED TO BE AN OVERSUPPLY BASED ON CURRENTLY USED SUPPLY-DEMAND MODELS, WILL NECESSARILY LEAD TO SOCIALLY UNDESIRABLE CONSEQUENCES.*

There is no consensus regarding the social consequences of the increasing supply of physicians, and available information and testimony on the subject are not definitive; both ''positive'' and ''negative'' effects can be identified.

Desirable consequences often cited include increased availability of physician services; improved quality of care due to additional time available per patient; greater physician attention to health promotion and disease prevention activities, teaching, and community service; and benefits from greater competition. Adverse consequences often cited include poorer quality of care due to fewer opportunities for maintaining skills; added patient risks resulting from performance of unnecessary procedures; and increased aggregate expenditures for health care and their effect on the uses of public funds.

The Subcommittee was also persuaded that physician oversupply is not an issue that warrants public policy action at this time. At the public hearing, for example, although many organizations made reference to a physician surplus, most of the testimony did not support any overt action to limit the overall supply of physicians. Calls for public or private sector responses to reduce the supply were offered by only a few organizations. The Subcommittee considered but did not recommend any national policy to restrict or reduce the supply other than leaving the determination to the marketplace. (It should be noted that there has been a recent decline in the medical school applicant pool and a gradual decrease in U.S. medical school enrollment.)

In the final analysis, given the difficulties in establishing the "right" number of physicians, the Subcommittee endorsed the view probably most cogently articulated by Harris, who argues that the cost to society of an undersupply of physicians exceeds the cost of an oversupply.[16] Accordingly, in this view, even if there were unanimous agreement on a future oversupply of doctors, efforts to restrict physician supply would still need to be pursued with moderation. The following recommendations of the Subcommittee concerning aggregate supply are consistent with that approach.

> *Recommendation 1.* **At the present time, the Federal Government should not attempt to influence physician manpower supply in the aggregate. However, it should focus its efforts in influencing clearly identified problems such as specialty shortages, quality of care, the geographic distribution, and representation of minorities in the physician manpower pool.**

In the recommendation above, the Subcommittee supports the Federal Government's focus on "clearly identified problems" concerning physician supply, among which quality of care is listed. The Subcommittee believes that appropriate Federal activities to address quality of care include developing model curricula in risk management and quality assurance for medical students and residents, and monitoring medical malpractice claims paid and sanctions against physicians (as required by the Health Care Quality Improvement Act, P.L. 99-660). The Subcommittee does not recommend that the Federal Government develop specific standards of care.

The concerns and resulting conclusions and recommendations related to specialty shortages, location of services provided, and the representation of minorities in medicine are dealt with elsewhere in the report.

> *Recommendation 2.* **There must be enough PGY-1 positions in GME to accommodate the qualified graduates of U.S. medical schools (osteopathic and allopathic). To the extent that resources are available, there should be enough PGY-1 positions available to accommodate the number of FMGs consistent with national policy.**

As mentioned above, the Subcommittee does not recommend any national policy to restrict or reduce the overall supply of physicians other than leaving the determination to the marketplace. It was persuaded, however, that if steps were taken to reduce the physician supply, the reduction should take place in entering class size rather than in the number of residency positions in GME. Otherwise, reductions in the number of GME positions would jeopardize the ability of qualified U.S. medical school graduates to complete their overall medical training.

B. PRIMARY CARE AND OTHER PHYSICIAN SPECIALTIES

The Subcommittee focused its first report on the primary care specialties targeted by Title VII of the Public Health Service Act (i.e., family practice, general internal medicine, and general pediatrics), with some attention given to the areas of geriatrics and preventive medicine. Although public testimony was received from other specialty organizations, the Subcommittee chose to defer detailed consideration of these areas until the next Council report, in part because data limitations and time constraints precluded studying the other specialties at this time.

Since 1980, assessments of the adequacy of physician supply by specialty have been limited. In many instances, the principal sources of information have been analyses of trends in the physician supply by specialty, and trends in the number of physicians in GME programs by specialty.

> *CONCLUSION B-1. THERE IS EVIDENCE OF AN UNDERSUPPLY OF CERTAIN PRIMARY CARE PHYSICIANS TOGETHER WITH AN OVERSUPPLY OF SOME NONPRIMARY CARE SPECIALISTS.*

Data on allopathic physicians provided by the AMA indicate that while the increase in primary care physicians has outpaced the growth of the general population, the supply of primary care physicians has grown more slowly than the supply of all other allopathic physicians. In the 5-year period ending 1986, the number of primary care physicians increased 15 percent, compared with a 19 percent increase in nonprimary care physicians (Table 6). The ratio of primary care physicians to population increased 9 percent compared with a 13 percent increase in the ratio of nonprimary care physicians to population. The number of family physicians and general practitioners grew 12 percent, the slowest of all primary care components.[11]

Based on projections by BHPr, these trends are expected to continue. Between 1986 and 2020 the supply of primary care physicians is expected to increase 39 percent compared with 49 percent for nonprimary care physicians (Table 7). Contributing to the slower growth rate of primary care physicians are the expected losses from the base of older physicians, many of whom are in general practice. The growth is expected to be the slowest in family medicine and general practice, which will increase an estimated 33 percent between 1986 and 2020. General internal medicine (exclusive of subspecialties) is expected to increase by 39 percent, the average for all the primary care specialties. Pediatrics, on the other hand, will increase the most, 49 percent, during that period.[4]

Table 6
Professionally Active * Physicians (M.D.s) by Specialty and Ratio per 100,000 Population: 1981 and 1986

Professional Specialty	1981	1986	Percent Change 1981 to 1986
	Number		
All Active	430,745	505,750	17.4
Primary Care	148,739	171,047	15.0
Family/General Practice	60,594	67,687	11.7
General Internal Medicine	60,118	69,996	16.4
General Pediatrics	28,027	33,364	19.0
Nonprimary Care	282,006	334,703	18.7
	Percent		
All Active	100.0	100.0	
Primary Care	34.5	33.8	
Family/General Practice	14.1	13.4	
General Internal Medicine	14.0	13.8	
General Pediatrics	6.5	6.6	
Nonprimary Care	65.5	66.2	
	Ratio		
All Active	184.5	206.2	11.8
Primary Care	63.7	69.7	9.4
Family/General Practice	26.0	27.6	6.2
General Internal Medicine	25.8	28.5	10.5
General Pediatrics	12.0	13.6	13.3
Nonprimary Care	120.8	136.5	12.9

* "Professionally active" is total physicians (M.D.s) less the number of "address unknown" and activity status "unclassified."
Sources: AMA, Physician Characteristics and Distribution in the U.S., 1982, 1987.[11] U.S. Bureau of the Census, *Current Population Reports*, Series P-25 (population for 1981 is 233,459,000 and for 1986 is 245,259,000).

The number of osteopathic physicians is expected to rise at a pace sharply higher than that likely to be experienced by allopathic physicians. Osteopathic physicians are expected to increase their share of the physician supply from 4 percent in 1986 to 6 percent in the year 2000, and to 8 percent in 2020 (Table 8). Recent data provided by the American Osteopathic Association (AOA) indicate that as of 1986, 47 percent of practicing osteopathic physicians were in general practice, 5 percent were in general internal medicine, and another 1.7 percent were in general pediatrics.[18]

Since 1981, there has been only a modest increase in the number of residents in allopathic postgraduate training in family practice, general internal medicine, and general pediatrics. If this trend continues, the Subcommittee notes that the projected number of physicians in primary care GME programs will be considerably lower by 1990 than the number projected for that year by GMENAC (GMENAC projected that the number of primary care physicians in 1990 would be adequate for the need). Consequently, conclusions of primary care physician undersupply may indeed be warranted.

Table 7
Professionally Active * Physicians (M.D.s) by Specialty and Ratio per 100,000 Population: 1986 and 2020

Professional Specialty	1986	2020	Percent Change 1986 to 2020
	Number		
All Active	521,780	757,130	45.1
Primary Care	182,110	252,550	38.7
Family/General Practice	71,320	95,100	33.3
General Internal Medicine	76,260	105,930	38.9
General Pediatrics	34,530	51,520	49.2
Nonprimary Care	339,670	504,580	48.6
	Percent		
All Active	100.0	100.0	
Primary Care	34.9	33.4	
Family/General Practice	13.7	12.6	
General Internal Medicine	14.6	14.0	
General Pediatrics	6.6	6.8	
Nonprimary Care	65.1	66.6	
	Ratio		
All Active	212.7	255.3	20.0
Primary Care	74.3	85.1	14.5
Family/General Practice	29.1	32.1	10.3
General Internal Medicine	31.1	35.7	14.8
General Pediatrics	14.1	17.4	23.4
Nonprimary Care	138.5	170.1	22.8

* Number of "professionally active" M.D.s adjusted to include proportion of "unclassified" and "address unknown."
Sources: U.S. DHHS, Sixth Report, Table 3-46, 1988.[4] U.S. Bureau of the Census, *Current Population Reports*, Series P25 (population for 1986 is 245,259,000 and for 2020 is 296,597,000).

In a recent survey of all States regarding physician manpower issues, a deficiency of primary care physicians and an excess of specialists were viewed as the most important problems.[20] At the public hearing, many organizations testified to the need for continued or increased emphasis on primary care skills to meet societal needs. The Subcommittee notes with interest an analysis made by the staff of Project HOPE that indicates that the United States, compared with Canada, has nearly twice as many nonprimary care physicians and about 20 percent fewer primary care physicians per unit of population.[3]

CONCLUSION B-2. THERE IS AN UNDERSUPPLY OF PHYSICIANS IN FAMILY PRACTICE.

The Subcommittee reviewed several sets of testimony on the demand for family physicians and their practice patterns. It also examined supply trends and analysis made by staff of BHPr as well as from the American Medical Association Council on Long Range Planning and Development.[21] As a result of this review, the Subcommittee is persuaded that given the current demand for the services of family physicians, the supply is inadequate and will remain so unless deliberate efforts are made to train more physicians in this specialty.

Table 8
Estimated Active * Physicians (M.D. and D.O.):
1986, 1990, 2000, and 2020

Physician Category	1986		1990		2000		2020	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All Active	544,830	100.0	597,040	100.0	708,600	100.0	820,810	100.0
M.D.	522,020	95.8	569,200	95.3	667,650	94.2	757,580	92.3
D.O.	22,810	4.2	27,840	4.7	40,950	5.8	63,230	7.7

* Number of "professionally active" M.D.s adjusted to include proportion of "unclassified" and "address unknown."
Source: U.S. DHHS, Sixth Report, Table 3-42, 1988.[4]

The following points were made in a prepared statement to the Subcommittee in June 1987 by Marjorie Bowman, M.D., representing the American Academy of Family Physicians (AAFP), and subsequently, in testimony of the AAFP at the public hearing:

- Family physicians continue to locate in shortage and rural areas in notably larger proportions than other medical specialties, thus helping to alleviate the national problem of geographic maldistribution. Data from the 1986 survey of family practice residency graduates indicate that 90 percent enter active family practice and over 47 percent locate their practices in rural and suburban communities of fewer than 25,000. The multidisciplinary training of family physicians permits them to care for most problems that are presented in their offices and to adapt to the diverse needs in various geographic areas.
- Geriatric health care is an important part of the family physician's training and practice. According to 1985 data from the National Ambulatory Medical Care survey, visits to family physicians represented 29.1 percent of the visits to all physicians by the Nation's 26.6 million residents age 65 and over.
- The demand for family physicians is significant and increasing; care management systems and HMOs are an important influence on the need. While one study indicated that some HMOs use substantially fewer primary care physicians than GMENAC estimated was needed,[24] this and other studies suggest that there is great variability among HMOs both in the number of physicians utilized and in their specialty composition. Of the primary care practitioners, HMOs often favor family physicians, as they appear to be more cost-effective and better trained for the gatekeeping role sought by HMOs. With the tremendous expansion of the managed care industry and increased emphasis on cost effectiveness, graduates of family practice residencies are at a premium and are sought after to manage those systems. As a result, HMOs are recruiting family physicians very heavily; 27 percent of residency graduate members of the AAFP report working in managed care systems. Care management systems are expected to increase, and with them will come a concurrent demand for family physicians.
- The supply of family physicians is unable to keep pace with the demand. With more than one-third of family physicians/general practitioners age 55 and older, attrition from practice for this age group is expected to be high. The number of family practice residency programs, which experienced tremendous growth from the inception of the specialty in 1969 until 1982, has now leveled off at approximately 382 programs with 2,456 first-year residents.
- The AAFP has concluded that given the current demand for the services of family physicians, the supply is inadequate and will remain so without deliberate efforts to train more family physicians.[22, 23]

In addition to the oral and written testimony provided at the public hearing by the AAFP, the Society of Teachers of Family Medicine also stated that there is a significant undersupply of family physicians.[25]

Attrition from general practice and slower supply growth are indeed corroborated by BHPr, which projects the supply of family physicians and general practitioners to grow at a considerably slower pace between 1986 and 2020 than the supply of all active allopathic physicians (33.3 versus 45.1 percent) (Table 7).[4]

CONCLUSION B-3. THERE APPEARS TO BE AN IMPENDING UNDERSUPPLY OF PHYSICIANS IN GENERAL INTERNAL MEDICINE.

The Subcommittee reviewed data and information presented to it and to the Council at the public hearing. In addition, it examined supply trends and analysis done by staff of BHPr. As a result of this review, the Subcommittee is persuaded that there appears to be an impending undersupply of physicians in general internal medicine.

The Subcommittee noted with great interest a study completed for the Federated Council for Internal Medicine by Lewin and Associates, Inc., which updated the GMENAC projections for internal medicine and extended them to 2020. Even with adjustments for increasing patient care needs due to the AIDS epidemic, changes in physician productivity due to increases in female physicians, and other adjustments based on more recent data on population growth, the study concluded that if current trends continue, increasing shortages of general internists will result each year, while surpluses will persist for most internal medicine subspecialties.[26]

Testimony provided to the Council by the Association of Professors in Medicine (APM) also described results of the Lewin study. The APM's testimony concluded with the following observations:

- Profound changes in health care delivery in the United States, especially in the field of internal medicine, require an extensive reassessment of manpower needs. Factors in this reassessment should include changing clinical demands, the increasing age of the U.S. population, and changing productivity of internists. All of these factors have tended to enhance the demand for internist services.

- A significant shortfall of highly qualified internists could be manifest in the future.
- The boundaries of the practice of family medicine and general internal medicine are rapidly merging because of the inability of family physicians in many areas to practice minor surgery, obstetrics, and neonatology. It is anticipated that current practice realities will lead to changes in the curriculum for both general internal medicine and family medicine in the near future.
- The APM recommended that the Council adopt the following statement as a conclusion on this topic: "Current information suggests that there may be an undersupply of physicians providing general adult medical care in the fields of family medicine and internal medicine."[27]

In his report to the Subcommittee of June 1987, Warren Tingley, M.D., in his capacity as President of the American Society of Internal Medicine, recommended financing approaches that improve payment for historically undervalued primary care services, to bring about a more appropriate mix of primary care physicians and procedure-oriented specialists.[28]

CONCLUSION B-4. THERE APPEARS TO BE AN IMPENDING OVERSUPPLY OF PHYSICIANS IN PEDIATRICS AT PRESENT.

The Subcommittee reviewed several sets of material and testimony provided to it by the American Academy of Pediatrics (AAP) on the adequacy of the supply of general pediatricians. In addition it examined supply trends and analysis made by staff of BHPr. As a result of this review, the Subcommittee was persuaded that there presently appears to be an impending oversupply of physicians in pediatrics.

In a report to the Subcommittee in June 1987, by Antoinette Eaton, M.D., representing the AAP, the following points were provided in support of this conclusion:

- During the past 20 years the number of pediatricians has more than doubled. Between 1970 and 1986, pediatric residency positions (including those for pediatric subspecialty programs) grew 2.5 times.
- The AAP predicts significant growth in the supply of pediatricians between now and 2000, corroborating BHPr projections.
- Several variables need to be factored into an assessment of pediatric manpower requirements, including the extent of children's insurance coverage, the changing health care delivery environment, changing child health care needs, pediatrician age and gender, and the role of allied health professionals in the delivery of care to children. The impact of several of these variables (e.g., health care delivery and managed care systems) are unknown at the present time. Further, the variability in the geographic distribution of general pediatricians needs to be factored into any assessment of supply and requirements.
- The AAP concluded that if children's health care needs alone were considered, the production of pediatricians would likely be in balance. Nevertheless, given current realities of lack of health insurance coverage for large numbers of children, an excess is imminent, particularly if pediatric residency programs are maintained at current levels. However, it is difficult to estimate the extent of the excess without knowledge of the future demands for child health care services.
- The AAP recommended that programs be supported to alleviate the current maldistribution of pediatricians and encourage their location in rural and inner-city areas. At the same time, the insurance crisis that has enveloped children must be addressed.[29]

Subsequent testimony of the AAP at the public hearing reiterated several of the previous points, but additionally stressed the uncertainties involved in estimating future needs for pediatricians, including the effect of the growth of alternative delivery systems, use of new technologies, increased demand for more time in parent and patient counseling, and emerging chronic or infectious diseases such as AIDS. Cited as perhaps more important is the impact that emerging adolescent morbidities, such as teen pregnancy, suicide attempts, and substance abuse, may have on requirements for pediatricians. In this subsequent testimony, the AAP maintained that, because of uncertainties surrounding pediatric manpower needs, it did not agree that pediatrics is an oversupplied specialty. It recommended that current levels of pediatric residents be maintained until data are found to substantiate the need for either an increase or a decrease in the numbers of residents based upon changes in children's health care needs.[30]

Additional materials reviewed by the Subcommittee included AAP transmittals that focused on (a) the number of uninsured children, and (b) the degree of geographic maldistribution of pediatricians. The AAP has estimated that between 12 and 16 million children from birth to age 21 (one-fifth of the U.S. child population) are uninsured. Concerning geographic distribution of pediatricians, it concluded that 85 percent of all U.S. counties may be underserved by pediatricians, and 45 percent may be underserved by all child health physicians.

The Subcommittee, in reaching its conclusion of an impending oversupply of pediatricians at present, notes that if policy were changed to extend health care coverage to the substantial numbers of uncovered children, the impending oversupply could rapidly vanish.

Recommendation 3. **The Subcommittee recommends that medical and osteopathic school graduates continue to enter training in primary care, particularly in family practice and general internal medicine. In addition to Federal and State governmental efforts, organized private sector incentives ought to be expanded.**

As described in the report of the Council's Subcommittee on Graduate Medical Education Programs and Financing, the information available on financing residency training programs, although limited, strongly suggests problems in supporting GME in the primary care specialties, especially family medicine. Even though there is a clear shift of practice and secondarily of training, to ambulatory settings, that subcommittee concluded that the current system of GME financing has disincentives for a number of health care education objectives that are becoming increasingly desirable. Training appears to be more difficult to finance in ambulatory than in inpatient settings, particularly in specialties whose services are not well reimbursed, and there also tend to be negative differentials in the reimbursement of ambulatory care. Operating cost increases as a result of teaching activities are thought to be greater in ambulatory than in inpatient teaching settings. The following two recommendations were developed to address these concerns.

> *Recommendation 4.* **Incentives such as grant programs, revisions in Medicare and Medicaid reimbursement policies, and student loan repayment programs must be provided to assure that sufficient numbers of primary care residency programs and positions are available to meet the needs of society.**

> *Recommendation 5.* **Financial support for education within the medical school and residency training programs should be made more economically and organizationally conducive to training primary care physicians. A particular focus could be on the ambulatory setting.**

C. GEOGRAPHIC DISTRIBUTION OF PHYSICIANS

Although the legislation authorizing the Council does not explicitly refer to the geographic distribution of physicians as an issue, a consensus on this subject was reflected in the consultations and testimony received by the Subcommittee and the Council.

> *CONCLUSION C-1. THERE IS A GEOGRAPHIC MALDISTRIBUTION OF PHYSICIANS, WITH TOO FEW PHYSICIANS IN MANY RURAL AND INNER-CITY AREAS.*

Data from the AMA show substantial variation in physician-to-population ratios among geographic areas. In 1985, the ten States with the lowest physician-to-population ratios had a weighted average of 145 physicians per 100,000 people, or about one-half the average of 291 per 100,000 in the top ten States.[11] This variation extends to urbanization and population size of an area as well. On average, metropolitan areas have many more physicians relative to population than do nonmetropolitan areas. In 1985, metropolitan areas had over 125 percent more patient care physicians per 100,000 people than did nonmetropolitan areas. Metropolitan areas had an average of 209 patient care physicians per 100,000 people, while nonmetropolitan areas had an average of only 92 per 100,000 (Table 9). Metropolitan areas with a population exceeding 5 million had over 300 physicians per 100,000, while nonmetropolitan areas with fewer than 10,000 population had only 51 physicians per 100,000.[3]

Table 9
Physician (M.D.) Ratios per 100,000 Population by County Classification and Population: 1975 and 1985 and Percent Change 1975-1985

County Classification and Population	1975	1985	Difference	Percent Change
	Total M.D.s			
U.S. Total	157.4	203.2	45.8	29.1
Metropolitan	185.0	238.9	53.9	29.1
5 million and over	248.9	303.0	54.1	21.7
1,000,000-4,999,999	199.0	261.5	62.5	31.4
500,000-999,999	168.1	223.3	55.2	32.8
50,000-499,999	139.2	183.3	44.1	31.7
Nonmetropolitan	74.9	97.6	22.6	30.2
50,000 and over	100.4	132.7	32.3	32.1
25,000-49,999	73.9	97.0	23.1	31.2
10,000-24,999	53.4	65.7	12.3	23.1
0-9,999	42.0	51.4	9.4	22.2
	Patient Care			
U.S. Total	133.3	179.2	45.9	34.4
Metropolitan	155.0	208.6	53.7	34.6
5 million and over	205.1	258.1	53.0	25.8
1,000,000-4,999,999	165.2	225.2	60.0	36.3
500,000-999,999	139.7	197.2	57.5	41.2
50,000-499,999	121.3	166.6	45.3	37.3
Nonmetropolitan	68.4	92.0	23.6	34.5
50,000 and over	90.5	124.2	33.7	37.2
25,000-49,999	67.9	92.1	24.2	35.7
10,000-24,999	49.6	62.5	13.0	26.2
0-9,999	39.2	48.9	9.7	24.8
	Office-Based			
U.S. Total	98.9	136.8	37.9	38.4
Metropolitan	111.2	155.0	43.9	39.5
5 million and over	134.6	178.0	43.4	32.2
1,000,000-4,999,999	116.8	165.4	48.6	41.6
500,000-999,999	100.0	145.5	45.5	45.5
50,000-499,999	96.7	134.1	37.4	38.7
Nonmetropolitan	62.0	82.7	20.7	33.4
50,000 and over	79.9	108.7	28.8	36.0
25,000-49,999	62.7	84.7	22.0	35.1
10,000-24,999	45.6	57.2	11.5	25.3
0-9,999	37.5	45.8	8.3	22.0

Source: BHPr, Office of Data Analysis and Management, as cited in Project HOPE, Table II-3, 1987.[3] Note: Differences and percent change calculations based on original unrounded numbers.

Trend data show that the number of patient care physicians grew more rapidly in metropolitan areas than in nonmetropolitan areas. Over the period 1970 through 1986, patient care physicians increased 79 percent in metropolitan areas compared with 47 percent in nonmetropolitan areas (Table 10). The number of physicians in general and family practice in nonmetropolitan areas actually declined by 3 percent between 1970 and 1986 while increasing 10 percent in metropolitan areas.[11] The least populated nonmetropolitan counties (0-25,000 population) exhibited smaller percentage increases in their ratios of physicians to population between 1975 and 1985 than the larger nonmetropolitan counties (Table 9).[3]

There is diversity in the distribution of physician specialists. In 1986 for example, 30 percent of the general and family

Table 10
Physicians (M.D.) in Metropolitan and Nonmetropolitan Areas by Activity Status, 1970 and 1986 and Percent Change 1970-1986

Metropolitan Status	Total M.D.s *	Patient Care: Total **	Patient Care: Office-Based General Practice	Patient Care: All Other Office-Based	Other Professional Activity	Inactive
			Number			
1970						
U.S. Total	301,323	255,027	50,816	138,108	26,317	19,621
Metropolitan	258,265	217,686	34,359	121,731	24,403	15,846
Nonmetropolitan	43,058	37,341	16,457	16,377	1,914	3,775
1986						
U.S. Total	544,308	444,705	53,622	272,135	39,107	46,835
Metropolitan	478,343	389,993	37,684	240,705	37,307	38,934
Nonmetropolitan	65,965	54,712	15,938	31,430	1,800	7,901
			Percent Change			
1970-1986						
U.S. Total	80.6	74.4	5.5	97.0	48.6	138.7
Metropolitan	85.2	79.2	9.7	97.7	52.9	145.7
Nonmetropolitan	53.2	46.5	-3.2	91.9	-6.0	109.3

* Excludes "address unknown" but includes "not classified." Total for 1970 includes 358 "not classified" and total for 1986 includes 13,661 "not classified."
** Consists of office-based and hospital-based practices.
Source: AMA, Physician Characteristics and Distribution in the U.S., 1987, pp. 28-29.[11]

practitioners in office-based practice were located in nonmetropolitan areas, whereas only 12 percent of the remaining office-based patient care M.D.s were located in these areas.[11]

As of March 1988, there were nearly 2,000 primary care Health Manpower Shortage Areas (HMSAs) as defined by the Department of Health and Human Services (DHHS). The population in those areas numbered nearly 34 million (Table 11). More than 4,100 additional practitioners would be needed in those areas to eliminate the shortage designations. Notwithstanding the generally higher ratios found in metropolitan areas, DHHS has estimated that 57 percent of the practitioners who are needed to remove the HMSA designation would be needed in metropolitan areas, suggesting that maldistribution also exists in urban areas.[31]

Other than the data gathered through the HMSA program, it is difficult to find and interpret physician data below the county level. There is no certainty that physician numbers alone or their proximity to underserved populations will ensure enhanced access to medical care for those who are geographically isolated or economically deprived. There may be poorly understood attitudinal, socioeconomic, or organizational factors that may adversely affect access to services. Nevertheless, one study of the physician distribution in nine U.S. cities found that:

1) In 1980 the number of patient care physicians per 100,000 population was substantially lower in the poverty areas of the cities than in the nonpoverty areas (Table 12);
2) The increase in patient care physicians relative to population between 1963 and 1980 was substantially lower in the poverty areas (21.8 versus 38.0 percent);
3) The number of office-based physicians per 100,000 population declined in the poverty areas, while increasing in the nonpoverty areas (-6.5 versus 14.9 percent); and
4) While the numbers of office-based primary care physicians per 100,000 population declined in both areas of the cities, the decrease was much greater in the poverty areas (-45.1 versus -27.4 percent).[32]

Table 11
Primary Care Health Manpower Shortage Areas: March 31, 1988

HMSA Designation	Designations: Number	Designations: Percent	Population (in millions): Designated Areas	Population (in millions): Estimated Unserved	Physicians Needed to Remove Designation: Number	Physicians Needed to Remove Designation: Percent
U.S. Total	1,931	100.0	33.7	12.8	4,139	100.0
Metropolitan	639	33.1	17.7	7.2	2,343	56.6
Non-metropolitan	1,292	66.9	16.0	5.7	1,796	43.4

Source: BHPr, Office of Data Analysis and Management, 1988.[31]

At the public hearing, testimony frequently expressed concern for residents in inner-city and poor rural communities. A number of organizations commented on the need to adopt a national health program or to maintain and strengthen existing programs, largely federally-supported, to meet such service needs. These latter programs included such activities as the National Health Service Corps (NHSC), primary care residency grants, community and migrant health centers, and efforts to increase the representation of minorities in medicine.

CONCLUSION C-2. THE MALDISTRIBUTION IS NOT AS SEVERE AS IT HAS BEEN IN THE RECENT PAST AND MAY WELL BE AMELIORATED, AT LEAST IN

Table 12
Physicians and Ratio per 100,000 Population in Ten U.S. Cities by Poverty Status: 1963 and 1980

Physician Category and Poverty Status	1963		1980		Percent Change 1963 to 1980	
	Number	Ratio	Number	Ratio	Number	Ratio
All Patient Care						
Poverty	4,076	164.3	5,398	200.1	32.4	21.8
Nonpoverty	7,173	161.0	7,352	222.2	2.5	38.0
Office-Based						
Poverty	3,308	135.5	3,379	126.7	2.1	-6.5
Nonpoverty	5,748	130.7	4,799	150.2	-16.5	14.9
Office-Based Primary Care						
Poverty	1,541	59.0	919	32.4	-40.4	-45.1
Nonpoverty	2,900	66.0	1,519	47.9	-47.7	-27.4

Source: Kindig, *et al.*, as cited in Project HOPE, Table II-6, 1987.[32, 3]

PART, AS THE OVERALL SUPPLY OF PHYSICIANS INCREASES. NEVERTHELESS, MALDISTRIBUTION REMAINS.

According to three studies by the Rand Corporation in the last few years, increases in the aggregate supply have been associated with a diffusion of some specialists to smaller communities. One study found that the percentage of small and medium-sized communities with board-certified specialists increased substantially between 1960 and 1977. For example, the proportion of communities of 5,000 to 10,000 people with an internist increased from 11 to 23 percent during that time. By 1977, the vast majority of communities above 20,000 people had at least one primary care specialist.[33] These physicians moved into towns previously unserved by their specialty as their numbers increased throughout the 1970s. The extent to which each specialty moved into previously unserved towns varied directly with the overall growth of that specialty. Data also indicated that by 1979, only a handful of towns with a population of 2,500 or more were farther than ten miles from a physician, that 98 percent of the U.S. population resided within 25 driving miles of a general/family practitioner, and that 80 percent lived within 20 straight-line miles of an internist, surgeon, pediatrician, and obstetrician/gynecologist.[34]

Williams, *et al.*, predicted that as the physician pool expanded in the 1980s, geographic access to specialty care for rural and small-town residents would increase. Nevertheless, they further predicted that this would still not meet what some consider to be the "medical need" of those geographically isolated or economically deprived.[35]

BHPr predicted that by 1994 the number of counties with a physician-to-population ratio of 1 to 2,500 would fall substantially as the supply of physicians increased. In 1982, 5,882 physicians were needed for all counties to have a ratio no greater than 1 to 2,500 (Table 13). It was estimated that in 1994 only 2,150 would be needed to achieve this ratio.[36]

Despite this information, it is difficult to draw conclusions from these studies about changes in the total supply of physicians in an area. For example, if a town lost two of its three general practitioners but gained an internist it would show evidence of the diffusion of internists even though the net result would be a decrease in the supply of physicians. Other studies were found to document the loss of physicians in certain areas.

Table 13
Number of Counties with a Population-to-Primary Care Physician Ratio Above 2500 to 1 and Number of Physicians Needed to Bring Those Ratios Down to 2500 to 1: 1982, 1986, 1990, and 1994

Year	Counties with a Ratio Above 2500:1			Physicians Needed for All Counties To Bring Ratio Down to 2500:1		
	Total	Nonmetro	Metro	Total	Nonmetro	Metro
1982	1,560	1,300	260	5,882	3,767	2,115
1986	1,225	1,033	192	4,432	2,874	1,558
1990	814	693	121	2,945	1,876	1,069
1994	600	511	89	2,150	1,383	767

Source: U.S. DHHS as cited in Project HOPE, Table II-8, 1987.[36, 3]

What can be concluded from recent findings on geographic distribution is that while there has been diffusion of physicians into less densely populated areas, and while access has improved in many of these areas, the existence of nearly 2,000 primary care HMSAs (Table 11) shows that many rural and urban areas remain unattractive to physicians for both economic and lifestyle reasons and these areas continue to be underserved. The Subcommittee also notes with interest that testimony provided at the public hearing indicates that there continues to be a serious problem of geographic maldistribution of physician services.

A recent study of the factors influencing the location and practice patterns of young physicians who recently settled in rural areas found that between 1975 and 1979, 60 percent of nonmetropolitan counties studied failed to gain young physicians (under the age of 35) practicing primary care. Thirty percent studied had no young physicians in either 1975 or 1979. Only 21 percent of counties with less than 10,000 population gained young physicians, compared with 61 percent of counties with 25,000 or more population.[37]

The characteristics of counties in which young physicians located were compared with the characteristics of counties that failed to attract them. Significant differences were identified: the counties gaining young physicians tended to have larger populations, higher population growth rates, greater population density, a better educated populace, higher income, less agriculture, and more health resources. Specific factors associated with the ability of nonmetropolitan counties to attract young physicians were the presence of a college or university, greater white collar employment, and a smaller farm population.

There have been many successful programs initiated by both government and the private sector to address this issue. There is some evidence, for example, that selective medical school admission policies may improve the geographic distribution of physicians. Selective admissions have been used to increase the likelihood that medical students will choose to practice within a State or in an underserved area of a State by granting preferential admission treatment to in-State residents or applicants with particular backgrounds or personal characteristics.

Preceptorships have also been used with effect and have been aimed at changing the educational environment to stress the positive aspects of primary care practice and practice in underserved areas. Moreover, research findings have suggested that the frequency and recentness of a medical school graduate's contact with a specific geographic area influence the probability of his or her choosing to practice in the area. Decentralized medical education programs such as WAMI (a program in Washington, Alaska, Montana, and Idaho) and WICHE (Western Interstate Commission for Higher Education) have been found to be effective in developing coordinated medical education and placement programs in relatively isolated and sparsely populated regions.

During the latter part of the 1970s physician scholarship programs for shortage areas grew; one study found that in the early 1980s the majority of States had such programs.[38] Students received financial aid in return for a commitment to practice in the State, usually in an underserved area. Moreover, there have been indications of some success at Federal and State levels of loan forgiveness programs designed to attract physicians into underserved areas, with instances of respectable retention rates beyond the period of contractual service.[39]

The NHSC program has attempted to alleviate geographic maldistribution problems by increasing access to primary care medical services in HMSAs. Several studies describing the achievements of this program were found in the literature. In addition, there is evidence that Area Health Education Centers have been effective in inducing physicians to practice in underserved areas and/or to practice primary care.[40]

It has been argued that the present reimbursement systems (Federal, State, and private) have tended to sustain historical differences in fees and incomes among geographic areas and to provide incentives for physicians to locate in high-income communities. Recent Federal legislative actions may increase the incentives for physicians to locate and practice in rural areas, by providing enhanced Medicare reimbursement to rural physicians.[41]

Notwithstanding the success of many existing programs to address this issue, the Subcommittee notes that such programs have not worked uniformly well for all geographic areas. In some cases, the effectiveness of programs appears to have been limited by community characteristics that are unattractive to young physicians such as depressed local economies, professional isolation, lack of cultural or recreational amenities, and lack of appropriate hospital and other medical facilities.

The Subcommittee has concluded that effective solutions to the maldistribution issue cannot be addressed solely by medical education. The problems are sufficiently complex to underscore the need for new as well as continuing approaches. As an example of a new approach, DHHS' creation of a new Office of Rural Health Policy offers a welcome opportunity to replicate the experience of successful programs and facilitate innovative approaches to meet the needs of residents in rural communities. The recent rural health medical education demonstration projects authorized by the 1987 Omnibus Budget Reconciliation Act (OBRA) represent another useful approach to addressing this problem.

Recommendation 6. **Activities that increase the likelihood that physicians will locate and remain in shortage areas should be continued and strengthened, such as:**

- **a. recruitment and selection of students entering medical schools;**
- **b. medical school programs including preceptorships in shortage areas;**
- **c. student financial support, such as loan repayment in exchange for service; and**
- **d. practice incentives (e.g., differential reimbursement, practice and community support).**

Recommendation 7. **More research and evaluation should be conducted relating to the geographic distribution of physicians.**

ADDENDUM

The conclusions and recommendations found in the preceding section were developed through a series of deliberations held by the Subcommittee through mid-February 1988, and are the versions approved by the Subcommittee at its February 17 meeting. In plenary sessions held subsequent to that date, the Council revised as well as added to several of these conclusions and recommendations. The final revised conclusions and recommendations of the Council concerning physician manpower are included in Volume I of the Council's report.

In the Council's revision of the Subcommittee's conclusion concerning the adequacy of the physician aggregate supply, the Council noted that its determination of physician oversupply is extremely susceptible to relatively minor changes in the assumptions of the models used to generate the forecasts of supply and requirements. It further noted that there are significant uncertainties that could change its assessment of physician oversupply. On this note, the Council was made aware of journal articles published subsequent to the Subcommittee's deliberations which argue that there will be little or no physician surplus between now and the year 2000. In one study,[42] the authors present a new framework for estimating the future balance between supply and demand with respect to physician services. They conclude that even if competitive medical plans serve approximately half the population by the year 2000, there will probably be little or no surplus of physicians in patient care. The study's premises and conclusions bring into sharper focus the degree of uncertainty regarding supply and requirements assumptions and methodologies. The study, for example, assumes a stronger increase in the demand for physician services than that assumed in other models; it also projects a greater increase in the number of physicians in research, teaching, and administration. As a consequence of uncertainties raised in the area of physician supply adequacy, the Council modified the conclusions of the Subcommittee on this issue. It is clear that further surveillance of information and analytic work in this area is warranted.

The Council reconsidered the Subcommittee conclusion regarding the adequacy of pediatric manpower, and modified the conclusion to formally link its assessment of adequacy of pediatrician supply with health care policy regarding insurance coverage for children, and the effects of any future changes in the policy.

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Report of the Subcommittee on Foreign Medical Graduates

INTRODUCTION

Charge

The charge to the Subcommittee on Foreign Medical Graduates (the Subcommittee) was to analyze (1) the extent to which hospitals are dependent on foreign medical graduates (FMGs) for the provision of essential medical services; (2) the quality of education provided in these programs; (3) the adequacy of the system used for assessing the competence of FMGs; (4) the issue of establishing an accreditation or approval process for schools located outside the United States and Canada; and (5) the extent to which international physician exchange programs might be affected by policies adopted regarding foreign-trained physicians.

Issues

In order to be responsive to the charge, the Subcommittee developed a list of issues to direct its inquiries with respect to FMGs. For the first report, the Subcommittee focused on the issues denoted here by asterisks.

*1. What effect will the removal (abrupt or phased) of FMGs from hospital training have on the availability of hospital-based services? What policies should be implemented if short-term effects are disproportionately distributed among hospitals and/or specialties?

*2. Should additional mechanisms for evaluating FMGs prior to their entry into GME be established?

*3. Is there a need for formal recognition of foreign medical schools? If so, how should this be accomplished?

*4. Are there different obligations to U.S. citizen FMGs (born and naturalized) than to non-U.S. citizen FMGs (permanent residents, refugees, and international visitors) respecting opportunities for graduate medical education?

*5. Should the United States continue to provide specialty training for international exchange visitors who will return to their native country to practice? If so, should existing graduate medical education training be modified with opportunities for other models of training/assistance?

6. Is there a need for a different financing system for FMGs in graduate medical education than for graduates of U.S. medical schools?

7. Are there quality of care issues specific to FMGs which require attention?

8. Are there other graduate medical education training program issues specific to FMGs which require attention?

9. What effect will there be on the total number, specialty, and geographic distribution of practicing M.D.s if the number of FMG entrants decline?

Strategy

The Subcommittee's first task was to identify which issues could be addressed in the first report. To assist in clarifying and addressing the issues and formulating its recommendations and conclusions, the Subcommittee reviewed an extensive number of documents which encompassed the above referenced issues affecting FMGs. The topics in these documents ranged from a review of the positions of public and private sector organizations on the accreditation of foreign medical schools to the costs of replacing essential medical services provided by FMGs in GME. Information was also sought from selected expert individuals and organizations, and views presented at the public hearing were assessed. The following are the topics presented and the experts who appeared before the Subcommittee:

Presentations Made to the Subcommittee on Foreign Medical Graduates

Presenter	*Topic*
March 17, 1987	
Dennis M. Gruskin Manpower Development Specialist Department of Labor	Public and Private Sector Policies and Procedures Which Impact Foreign Trained Physicians
Ralph Madden Chief of Guaranteed Student Loan Policy Section Department of Education	
Bryant S. Galusha, M.D. Executive Vice President Federation of State Medical Boards	
John C. Gienapp, Ph.D. Secretary, Accreditation Council on Graduate Medical Education	
Thomas W. Mou, M.D. President and Chief Executive Officer Educational Commission for Foreign Medical Graduates	
Max R. Lum, Ed.D. Medical Education Specialist Division of Medicine Bureau of Health Professions HRSA, PHS, DHHS	Data on Foreign Medical Graduates
Charles H. Davis, Ph.D. Economist Division of Medicine Bureau of Health Professions HRSA, PHS, DHHS	

(continued)

Presenter	*Topic*
Maria Segarra, M.D. Chief, Special Projects Section Division of Medicine Bureau of Health Professions HRSA, PHS, DHHS	
June 29, 1987	
Robert Cohen, M.D. Vice President of Medical Operations New York Health and Hospital Corporation	Impact on Services If Residency Programs Are Reduced or Eliminated
Michael Geheb, M.D. Associate Chairman and Program Director Department of Internal Medicine Wayne State University	
Richard Rieselbach, M.D. Chairman, Committee on Public Policy, and Legislative Liaison Association of Program Directors in Internal Medicine	
Richard L. Fruchterman, J.D. Assistant General Counsel United States Information Agency	Legal, Moral, or Ethical Implications Regarding Different Treatment of Medical Graduates
Laurence McCullough, Ph.D. Senior Research Scholars Kennedy Institute of Ethics Georgetown University	
Brenda Frank, J.D. Attorney, Public Health Division Office of General Counsel U.S. Public Health Service	
Pearl Chang Senior Immigration Examiner Immigration and Naturalization Service	
September 1, 1987	
Geoffrey Pope Program Development Officer U.S.-Saudi Arabian Joint Commission Department of the Treasury	The Role of the Public and Private Sectors in International Activities
Carlos J. M. Martini, M.D. Vice President for Medical Education American Medical Association	
Thomas Mou, M.D. President and Chief Executive Officer Educational Commission for Foreign Medical Graduates	
Brenda Selser Public Health Analyst Division of Medicine Bureau of Health Professions HRSA, PHS, DHHS	
Bonnie J. Preston Research Analyst SysteMetrics/McGraw Hill	Physician Quality Assessment Methodologies and Their Applicability to Evaluating Care Provided by Medical Residents
Ralph Berry, Jr., Ph.D. President Policy Analysis, Inc.	Cost and Access Implications of Replacing Services Provided by Foreign Medical Graduates
Max R. Lum, Ed.D. Medical Education Specialist Division of Medicine Bureau of Health Professions HRSA, PHS, DHHS	Indigent Care and Graduate Medical Education
October 5, 1987	
Navin Shah, M.D. Alliance of Foreign Medical Graduates	Different Treatment of Medical School Graduates Based on Citizenship and/or Country of Medical Education (Foreign School Perspective)
Bernard Ferguson, J.D. Attorney for Parents League of American Students of Medicine Abroad	
Antonio Donesa, M.D. Executive Director American College of International Physicians	
Kevin P. Donovan, J.D. Attorney for North American Students Association	
Joseph R. Keyes, Jr. Vice President for Institutional Planning and Development Association of American Medical Colleges	Different Treatment of Medical School Graduates Based on Citizenship and/or Country of Medical Education (U.S. Medical Perspective)
F. Daniel Duffy, M.D. American College of Physicians	
Walter Weintraub, M.D. American Psychiatric Association	
February 17, 1988	
Monica R. Dreuth Director, Division of Medical Affairs American Hospital Association	Availability of Alternative Sources of Care in Adjacent Community Facilities
Lauren G. Sharp, Ph.D. Program Director, Division of Medical Affairs American Hospital Association	
Special Guest	
Robert L. Volle, Ph.D. President National Board of Medical Examiners	Equivalency of National Board of Medical Examiners' (NBME) Examinations, Part I and Part II and The Foreign Medical Graduate Examination in the Medical Sciences (FMGEMS)

Background

The migration of physicians between societies and nations is a world-wide phenomenon. In the United States, as in many other nations, the entry of foreign-trained physicians into its physician supply has elicited controversy for many years. The issues have always been rather complex, as they are today.

Before World War II, there was little concern about FMGs who came to this country to practice. In fact, during the early years of the 20th century it was typical for U.S. medical graduates to receive their specialty education in European hospitals. After World War II, what had been a minor movement of European-trained physicians and medical students to this country became a major exchange program as Congress sought to deal with, first, the tragedy of the war, and second, the various health care needs of both the United States and the foreign countries. Students and scholars were welcomed into the United States, while American students were encouraged to study abroad primarily to dissipate war tensions and cultivate friendly understanding among the world's population.

It has been since the 1960s that U.S. reliance on foreign-trained physician manpower has been of concern. There was some concern in the early 1970s that foreign-trained physicians had reached unprecedented numbers, representing 27.3 percent of all new licenses issued in 1970[1] and 33 percent of total filled residencies in the same year.[2] Since then the FMG representation in the U.S. physician pool has remained at about 20 percent while their proportions in GME have declined. In 1986, FMGs represented 22.4 percent of all active M.D.s in the United States[3] and 15.7 percent of filled residencies.[4]

The future contribution of FMGs to physician supply is difficult to predict. While we have excellent data regarding their presence in GME and in practice, we lack information regarding the current composition and size of the group wishing to enter practice in the United States. Verifiable information on U.S. citizens studying medicine outside of the country is not available, and data on the immigration of physicians since 1979 are limited. While there is some evidence that a backlog exists of individuals unable to complete their postgraduate educational goals, we do not know the size of this group, their location or their current employment status.

Four major categories of FMGs participate in GME: (1) native-born American citizens who have graduated from foreign medical schools and return to the United States for GME; (2) immigrants who are naturalized American citizens; (3) aliens with permanent resident status in the United States; and (4) exchange visitor physicians who are in the United States on temporary visas and will be returning to their home countries upon completion of their training. The native-born Americans, the naturalized American citizens, and aliens with permanent resident status constituted more than 83 percent of all FMGs in GME in 1986.

Although the number of FMGs in GME has declined over the last several years, they represented 15.7 percent (12,035) of all residents in training in 1986 (Table 1). They were not distributed uniformly but tended to be clustered in certain specialties, i.e., they held more than 20 percent of the filled positions in 8 specialties—allergy and immunology (25.8 percent), internal medicine (20.2 percent), neurology (24.1 percent), nuclear medicine (40.3 percent), pathology (30.4 percent), pediatrics (25.6 percent), physical medicine and rehabilitation (23.6 percent), and psychiatry (26.7 percent) (Table 2). In addition, although the proportional representation of FMGs in 8 of the 10 largest specialties declined substantially between 1976 and 1986, the percentages increased in the primary care specialties of internal medicine and family medicine (Table 3). Similarly, FMGs tended to be clustered in a relatively small group of States (Table 4). They accounted for more than 20 percent of the total medical residents in seven States: New Jersey, New York, North Dakota, Illinois, Connecticut, Delaware, and Michigan (Table 5). Approximately 56 percent of all FMG residents were located in these seven States.

Table 1
FMGs in Residency Programs by Citizenship, 1982-1983 to 1986-1987

	All FMGs		U.S. Citizens		Foreign Nationals	
Academic Year	Number	% of All Residents	Number	% of All FMGs	Number	% of All FMGs
1982-1983	13,123	19.0	6,388	48.7	6,735	51.3
1983-1984	13,221	18.4	6,990	52.9	6,231	47.1
1984-1985	13,337	17.9	7,314	54.8	6,023	45.2
1985-1986	12,509	16.8	6,868	54.9	5,641	45.1
1986-1987	12,035	15.7	5,845	48.6	6,190	51.4

Source: American Medical Association, 1984 and 1987.[3,4]

Table 2
Number of FMGs in Specialties With More Than 20 Percent FMGs, 1986

Specialty	Total Residents	FMGs	% FMGs of Total
Allergy and Immunology	244	63	25.8
Internal Medicine	18,116	3,664	20.2
Neurology	1,408	339	24.1
Nuclear Medicine	176	71	40.3
Pathology	2,299	700	30.4
Pediatrics	5,817	1,490	25.6
Physical Medicine and Rehabilitation	817	193	23.6
Psychiatry	4,892	1,305	26.7

Source: American Medical Association, 1987.[3,9]

Table 3
Percentage Point Change of FMGs for the Ten Largest Specialties: 1976-1986

Specialty	Percent FMGS of Total 1976	Percent FMGs of Total 1986	Percentage Point Difference
Internal Medicine	18.9	20.2	+ 1.3
Surgery	30.4	9.3	− 21.1
Pediatrics	30.3	25.6	− 4.7
Family Practice	8.8	11.4	+ 2.6
Psychiatry	34.8	26.7	− 7.1
Obstetrics and Gynecology	25.0	8.7	− 16.3
Pathology	43.5	30.4	− 13.1
Orthopedic Surgery	12.2	1.6	− 10.6
Radiology, Diagnostic	24.1	4.9	− 19.2
Anesthesiology	47.2	9.8	− 37.4
All Other Specialties	27.6	16.9	− 10.7
TOTAL ALL SPECIALTIES	25.6	15.7	− 9.9

Source: Adapted from American Medical Association, 1977 and 1987.[3,10]

Table 4
Number of Residents in Top Ten States Ranked by Percent of All FMGs, 1986

State	Number of Residents	Percent	Number of FMGs	Percent of All FMGs
New York	11,041	14.4	3,651	30.3
New Jersey	2,115	2.8	1,014	8.4
Illinois	4,258	5.5	1,008	8.4
Pennsylvania	4,911	6.4	730	6.1
Michigan	3,101	4.0	626	5.2
California	7,183	9.4	593	4.9
Ohio	3,826	5.0	545	4.5
Connecticut	1,552	2.0	353	2.9
Texas	4,554	5.9	327	2.7
Florida	1,937	2.5	312	2.6
Subtotal	44,478	57.9	9,159	76.1
TOTAL U.S.	76,815	100.0	12,035	100.0

Source: American Medical Association, 1987.[11], [12]

Table 5
States With More Than 20 Percent FMG Residents, 1986

State	Total Residents	U.S. Medical Graduates	Foreign Medical Graduates	Percent FMG
New Jersey	2,115	1,101	1,014	47.9
New York	11,041	7,390	3,651	33.1
North Dakota	108	81	27	25.0
Illinois	4,258	3,250	1,008	23.7
Connecticut	1,552	1,199	353	22.7
Delaware	169	132	37	21.9
Michigan	3,101	2,475	626	20.2

Source: American Medical Association, 1987.[11], [12]

CONCLUSIONS AND RECOMMENDATIONS

A. FOREIGN MEDICAL GRADUATES AND ACCESS TO GRADUATE MEDICAL EDUCATION

Discussions about financing for GME during the past several years have included suggestions that the training of FMGs should not be financed by Medicare. These suggestions have been based on the belief of some that the entrance of FMGs into the physician population exacerbates the problem of oversupply. Others have expressed concern about the Nation's limited ability to assess the quality of the basic medical education received by FMGs and the consequent potential for inadequacy of care provided by FMGs. Some have proposed treating U.S. citizen FMGs differently from alien FMGs.

The Subcommittee reviewed pertinent current literature, reports and opinions of various groups and organizations, and information from numerous individuals regarding the issue of differential access to GME based on educational credentials, citizenship status, or location of undergraduate medical education. It heard testimony regarding aliens' rights, U.S international treaty agreements, and current procedures used for assessing FMGs' readiness to enter GME. The Subcommittee was persuaded that the principles of individual competence and merit should not be compromised by the interposition of criteria such as citizenship, country of origin, or location of medical education.

CONCLUSION A-1. THE PRINCIPLE OF INDIVIDUAL COMPETENCY AS THE DOMINANT CRITERION FOR SELECTION INTO GME SHOULD BE MAINTAINED.

CONCLUSION A-2. DIFFERENTIATION AMONG FMGs ON THE BASIS OF CITIZENSHIP OR IMMIGRATION STATUS IS CONTRARY TO THIS PRINCIPLE, AS WELL AS TO U.S. TRADITION, AND ETHICAL CODE, AND IS PERHAPS ILLEGAL.

CONCLUSION A-3. IT IS HIGHLY DESIRABLE THAT ALL GRADUATES OF U.S. ALLOPATHIC AND OSTEOPATHIC MEDICAL SCHOOLS BE ABLE TO OBTAIN AN ENTERING POSITION IN GME. HOWEVER, U.S. MEDICAL SCHOOL GRADUATES SHOULD NOT BE GRANTED AUTOMATIC PRIORITY OVER THE QUALIFIED GRADUATES OF NONDOMESTIC MEDICAL SCHOOLS AS A MEANS OF ACHIEVING THIS GOAL.

CONCLUSION A-4. U.S. MEDICAL SCHOOLS ARE OBLIGATED TO PROVIDE THE BEST POSSIBLE EDUCATION WHICH WILL ALLOW ALL GRADUATES TO COMPETE EFFECTIVELY FOR GME POSITIONS. THEY SHOULD CAREFULLY EVALUATE ALL STUDENTS AND GRADUATE ONLY THOSE CONSIDERED UNEQUIVOCALLY QUALIFIED FOR GME.

The Subcommittee reviewed the current system for assessing the readiness of FMGs to enter GME (described later in this chapter). As a result of this review, the Subcommittee was persuaded that with the addition of tests of spoken English and applied clinical skills, the evaluation system for FMGs will be better able to assess individual capability.

The Subcommittee heard testimony regarding alien rights. It learned that alien rights with regard to many aspects of everyday life—employment, property ownership, access to governmental benefits—depend to a large degree on the equal protection guaranteed to aliens by the United States Constitution.[13] The equal protection clause of the Constitution does not forbid Congress and the States from treating aliens differently from citizens (or from differentiating between groups of aliens) when it comes to access to employment rights or education. However, in view of the determination of the Supreme Court that alienage is a suspect classification requiring strict judicial scrutiny of alienage-based distinctions,[14] these distinctions must be justified. Thus, a compelling State interest must be shown by the Federal Government or State to justify a restriction of an alien's access to the usual rights and amenities available to citizens.

The Subcommittee noted, however, that while State-imposed distinctions based on alienage must withstand equal-protection scrutiny, purely private decisions regarding employment, education, or admission to private institutions are not subject to equal-protection scrutiny. These private decisions may be susceptible to bars on discrimination, but only if the decision is discriminatory on the basis of race, color, religion, or national origin."

> ***Recommendation 1.* Selection into GME programs should be based on the relative qualifications of the individual applicants, not on group or institutional associations.**
>
> ***Recommendation 2.* For the purpose of limiting access to GME, the Federal Government should not establish policies which would discriminate against medical school graduates on the basis of citizenship, immigration status, or medical school location.**

It was noted that individual institutions may wish to give preferences to their graduates or graduates from schools in their own State. However, the Subcommittee was persuaded that selection based on individual competence remains a morally and intellectually sound basis of operation. The Subcommittee further noted that it is cognizant that the considerable public and private investment in undergraduate medical education in U.S. medical schools should be valued and protected. The granting of the M.D. or D.O. degree in the United States *per se* implies preparedness to enter and complete GME. However, expectations of an unbroken progression from undergraduate medical education to GME, to licensure, and to practice should not diminish the principle of individual competence as a selection criterion for advanced training.

B. ASSESSMENT OF FOREIGN MEDICAL GRADUATES

Considerable attention was directed to the readiness of FMGs to enter GME. This subject represented an area of substantial controversy, which was extensively addressed at the Subcommittee meetings and at the public hearing. At the center of the controversy is the existence of a dual examination system for testing the medical knowledge of U.S. medical school graduates and students/graduates of foreign medical schools. Most students of U.S. and Canadian medical schools, which are accredited by the Liaison Committee on Medical Education (LCME), sit for Part I and Part II of the National Board of Medical Examiners' examinations (NBME I and II) when tested for knowledge in the basic medical and clinical sciences. Access to these examinations is limited to students and graduates of U.S. and Canadian medical schools. In contrast, students and graduates of non-LCME-accredited medical schools sit for the Foreign Medical Graduate Examination in the Medical Sciences (FMGEMS) when tested for similar knowledge. The latter examination is derived from the pool of examination items owned by the NBME and used for the preparation of Part I and Part II of the NBME examinations.

Several organizations testified at Subcommittee meetings and at the public hearing that they believed the dual system to be essentially discriminatory. Recent decisions made in the private sector about conversion to a single examination pathway may lead to a resolution of the controversy.

The Subcommittee heard testimony regarding several areas of weaknesses that are being corrected in the assessment system for FMGs. First, a spoken English test is expected to be added to the English examination. The current proficiency examination tests for comprehension of spoken English, English structure, and vocabulary; it does not, however, assess the English-speaking capabilities of the test taker. Second, an applied clinical skills test is under development.

Computer-based approaches to testing clinical knowledge and skills show promise. Although still being researched, these have moved into the field-testing stage. It is expected that with the increased availability of computer equipment in U.S. medical schools, computer-based testing may be the norm by the early 1990s. However, field tests have demonstrated that familiarity with computer equipment and computer-based testing methodology is required to avoid negative bias for new users. Therefore, some caution is required regarding preliminary application of this new technology for students of both U.S. and foreign medical schools.

> *CONCLUSION B-1. THE CURRENT SYSTEM FOR TESTING FMGs ON KNOWLEDGE IN THE BASIC MEDICAL AND CLINICAL SCIENCES IS ADEQUATE. WITH THE EXPECTED ADDITION OF A TEST TO ASSESS APPLIED CLINICAL SKILLS AND A TEST OF SPOKEN ENGLISH, CURRENT CONCERNS REGARDING THE EVALUATION OF FMG CANDIDATES FOR ENTRY INTO GME WILL HAVE BEEN ADDRESSED.*

The Subcommittee is supportive of actions currently being undertaken by the NBME, the Educational Commission for Foreign Medical Graduates (ECFMG), and other organizations to endorse the offering of NBME I and II as an alternative to FMGEMS for foreign medical students/graduates. This does not imply a diminution of the role or function of the LCME in assuring the quality of medical education in the United States. However, assessments of student or graduate competence to enter higher levels of education or to practice, while closely linked to the structure and process of education, should be seen as distinct activities from accreditation processes that assess the institutional resources available for the provision of the required education.

The United States has a rigorous system for accrediting medical education programs and schools. This system requires assessment of students' knowledge and clinical skills by personal observation and written examinations throughout the entire undergraduate education period. In the absence of a similar system for review of individual progress in applied clinical skills for students in foreign medical schools, the addition of clinical skills assessment to the current evaluation program is believed to partially fulfill this need.

> ***Recommendation 3.* A single medical knowledge examination for all GME candidates should be implemented as soon as possible.**
>
> ***Recommendation 4.* If an applied clinical skills assessment examination is introduced for general applicability for entry into GME, one examination should be used in evaluating all candidates including graduates of U.S. medical schools.**

***Recommendation 5.* The private sector should be sensitive to bias in testing which may be caused by use of new testing technologies and methodologies.**

C. RECOGNITION OF FOREIGN MEDICAL SCHOOLS

The Subcommittee received testimony and reviewed background material on the issue of whether there should be established a system for "accreditation" or "recognition" of foreign medical schools by private or public entities in the United States.

Past attempts to establish a formal recognition system for foreign medical schools have not been successful. From 1950 to 1953, the American Medical Association's (AMA) Council on Medical Education, and the Association of American Medical Colleges (AAMC) maintained a list of acceptable foreign medical schools. This list was abandoned in light of the resources required to undertake initial surveys and periodic resurveys of foreign schools. From 1982 to 1985, the Federation of State Medical Boards (FSMB) undertook to collect information that licensing boards could use to evaluate foreign schools. Like the AMA and the AAMC earlier, the FSMB has found this difficult and is not currently collecting such information.

At the Federal level, several attempts have also been made in the past decade to establish structures and/or measurements for recognition of foreign medical schools. Since 1978, the Department of Education (DOE) has proposed several approaches for determining the eligibility of foreign medical schools' participation in the Guaranteed Student Loan Program. There have been court challenges to early regulatory proposals that specified pass rates on designated examinations as a proxy measure of comparability to U.S. medical schools.

At the time the Subcommittee received testimony, the DOE was in the process of preparing regulations using the same approach but based on legislation enacted in 1986 that requires the school to meet at least one of the following requirements: (1) at least 60 percent of the students enrolled in the school are nationals of the country in which the school is located; or (2) U.S. nationals attending the school must achieve a pass rate on the examinations administered by the ECFMG that is not less than 45 percent for students taking such examinations in the first and second years after the date of enactment of the Act, and not less than 50 percent for students taking such examinations in any subsequent year.[16]

The Veterans Administration, after many years of deliberations, promulgated regulations on April 22, 1987, delineating accrediting/recognition and length of education criteria under which a foreign medical school may be approved.[17]

The U.S. General Accounting Office has prepared two Reports to Congress, one in 1980 and another in 1985 [18] that address the issues and concerns associated with the education and training that foreign medical schools provide to U.S. citizens who plan to return to the United States to practice medicine. The first report recommended that a private sector organization be given the responsibility to determine if the education and training provided in a foreign medical school is comparable to that provided in a U.S. medical school. The FSMB effort mentioned above was a specific response to this recommendation. The second report recommended that Federal legislation be introduced authorizing the Secretary, DHHS, to accredit foreign medical schools.

In 1985, in response to this recommendation, Congressman Claude Pepper introduced a bill that proposed to establish a mechanism to accredit foreign medical schools using "an appropriate private organization that provides for the accreditation of courses of study in medicine in medical schools located in the United States."[19]

The LCME, the private agency which accredits medical schools in the United States and Canada, rejected this proposed task, indicating that "an attempt, for governmental purposes, to apply this process beyond its present jurisdiction, would represent a distortion, and serious infringement, on the present well established process."[20] The LCME went on to state, however, that it "recognizes the significance of the problem of the evaluation of the education of foreign medical graduates and hopes that its sponsoring organizations will reach a consensus as to how best this may be accomplished and to assist with the enhancement of present mechanisms, and the establishment of new mechanisms, for this purpose."[20] In addition, the AAMC, one of the two sponsoring organizations for the LCME, opposed the acceptance of such responsibility by the LCME and officially declared its unwillingness to permit such a venture. The bill was not enacted into law and has not been reintroduced in the current Congress.

At the State level, some States have incorporated specific requirements regarding the recognition of medical education in their physician licensure procedures. These requirements range from a simple requirement that the school be listed in the *World Directory of Medical Schools* to extensive specifications regarding the content and length of education leading to the M.D. degree.

Worldwide, regional efforts are underway for the establishment of institutional assessment systems. For example, the Panamerican Federation of Associations of Medical Schools (PAFAMS) is supporting a proposal for a 5-year study sponsored jointly by the AMA and PAFAMS "to develop measurable standards of institutional development through evaluation for Latin American medical education programs. The proposed project would involve the testing of standards and instruments in various cultures and circumstances, the development of a reliable, valid instrument for institutional self-assessment, the establishment of a voluntary nongovernmental peer review process that is economically feasible and politically acceptable, and the design of opportunities and support mechanisms to assist individual medical schools in preparing additional criteria for academic excellence."[21]

The project is seeking funding in the private sector. If it is successful, it is expected that a system for recognition of medical schools similar to the United States' system, will be operational in Central and South America. However, it is conservatively expected to be about five years before such a system is fully operational.

The Subcommittee found the following points to be sufficiently compelling to question the advisability of establishing an accreditation system within the United States for foreign medical schools:

- The process of accreditation now works within the United States because of the shared values and mutual commitment to improvement characterizing the profession and the institutions. Evaluation by the U.S. in the absence of this mutuality, as would be the case in other cultures and/or in proprietary schools, is fundamentally inappropriate and flawed.
- Cultural aspects of medicine are important components of analysis for assessing comparability and/or differences in medical education. Although medicine as a science can probably be practiced anywhere in the world regardless of social and cultural differences, educational systems are not free of societal constraints. There is not homogeneity in medical education; i.e., the structure and processes of education in all countries are intimately associated with the values and norms of those societies.
- As different regions of the world are confronted with questions similar to those in the United States regarding the quality of their medical education, mechanisms are being established to set standards and procedures for regional recognition of schools. It is in the best interest of the United States to work cooperatively with these efforts.
- Certain historically recognized foreign medical training institutions, which may have no particular desire to enroll Americans, have no incentive to respond to a foreign-led accreditation system.
- The large number of foreign medical schools would make it difficult and costly to review schools in a timely manner.
- From an international perspective, the activity can be construed to be presumptuous and insensitive.
- Such an effort could be misconstrued by physicians interested in immigrating to the U.S. and raise expectations that are not realistic or achievable.

CONCLUSION C-1. IT WOULD BE BOTH PRESUMPTUOUS AND UNWISE FOR THE GOVERNMENT AND/OR THE PRIVATE SECTOR TO ATTEMPT TO ESTABLISH PROCEDURES FOR ACCREDITING MEDICAL SCHOOLS OUTSIDE ITS TERRITORY.

Recommendation 6. **Neither the Government nor the private sector should establish a system for accreditation of foreign medical schools.**

Recommendation 7. **The private sector should endorse and assist the efforts of foreign countries to establish national or regional standards and procedures which will improve education in their medical schools.**

D. FMGs AND ACCESS TO CARE

Recent efforts to reduce or eliminate financing of GME for FMGs under Medicare have generated heated controversy regarding the effect reductions would have on access to care for outpatient and inpatient services in hospitals. The Subcommittee was specifically asked to explore the implications of a national policy that would restrict the number of FMGs in GME. Testimony, data analysis, and several studies provided information regarding the extent to which hospitals are dependent on FMG residents for the provision of essential medical services, the specialties with large numbers of FMGs, and the potential for substitution of FMGs with other types of providers.[22]

Analysis of published data of the Council of Teaching Hospitals (COTH) shows that of its 435 member hospitals, 109 have been referred to as "FMG dependent"—i.e., hospitals with 10 or more residents of whom 25 percent or more are FMGs; the number of hospitals decreases to 34 when the FMG criterion is increased to 50 percent (Table 6). More detailed analysis of the characteristics of these hospitals, undertaken in the studies referred to above, found that:[22]

- FMG-dependent hospitals would appear to serve an economically disadvantaged population, at least as measured by the proportion of patients on Medicaid. (FMG-dependent hospitals had more than 18 percent Medicaid patients; nondependent hospitals had 12 percent.) Similarly, although not as dramatic a difference, FMG-dependent hospitals appear to serve proportionately more Medicare beneficiaries than do their nondependent counterparts. The proportion of Medicare patients was 26.4 percent for FMG-dependent hospitals and 23.2 percent for the nondependent COTH hospitals.
- Consistent with the apparent phenomenon of an economically disadvantaged population being served by FMG-dependent hospitals is the dramatic difference in the relative population density of the areas served by these institutions. Clearly, FMG-dependent hospitals are disproportionately serving the high density, often poor, central city populations.

The Subcommittee noted, however, that available data do not reflect homogeneity or easily support generalized characteristics of hospitals and FMG dependence. First, only a relatively small percentage of all FMGs may be concentrated in the most affected inner-city hospitals. Second, there are other inner-city hospitals providing care to the poor that are not FMG dependent. Even in the FMG-dependent hospitals, substantial differences in the percentage of FMG program participants exist among specialties. The primary care specialties of pediatrics and internal medicine are likely to have larger numbers of FMGs than the other specialties in these hospitals. Third, there is concern that the membership of COTH is not representative of all teaching hospitals. There are many teaching hospitals which are not COTH members that have FMG residents. These hospitals are mostly small community teaching hospitals with limited or no affiliations with medical schools.

Organizations that provided testimony before the Subcommittee and at the public hearing often called attention to the health care access needs of underserved population groups. This concern expressed itself in several ways; in some instances specific reference was made to the role played by FMGs in providing

TABLE 6
COTH HOSPITALS WITH 25% OR MORE OF THEIR ACCREDITED GRADUATE MEDICAL EDUCATION POSITIONS FILLED BY FOREIGN MEDICAL GRADUATES

State	Hospital	Total Number of Residents	Total Number of FMG Residents	Percent FMGs of Total
CALIFORNIA	The Hospital of the Good Samaritan	37	13	35.1
	Martin Luther King, Jr. General Hospital	282	107	37.9
	University of California, Irvine	215	64	29.7
CONNECTICUT	Bridgeport Hospital	80	23	28.7
	St. Vincents' General Medical Center	58	34	58.6
	Mt. Sinai Hospital	51	29	56.8
	New Britain General Hospital	61	24	39.3
	The Stamford Hospital	41	11	26.8
	St. Mary's Hospital	47	35	74.4
	Waterbury Hospital	58	16	27.5
DISTRICT OF COLUMBIA	D.C. General Hospital	171	63	36.8
FLORIDA	Jackson Memorial Hospital	395	145	36.7
	Mt. Sinai Medical Center	134	35	26.1
ILLINOIS	MacNeal Memorial Hospital	53	17	32.0
	Cook County Hospital	537	282	52.5
	Illinois Masonic Medical Center	114	43	37.7
	Mercy Hospital and Medical Center	107	51	47.6
	Mt. Sinai Hospital Medical Center	119	85	71.4
	St. Joseph Hospital	57	21	36.8
	St. Mary of Nazareth Hospital Center	63	47	74.6
	Veterans Administration Medical Center (Hines)	179	83	46.3
	Christ Hospital	66	47	71.2
LOUISIANA	Children's Hospital	20	5	25.0
	Veterans Administration	96	26	27.0
MARYLAND	Franklin Square Hospital	76	29	38.1
	Maryland General Hospital	36	22	61.1
MASSACHUSETTS	Carney Hospital	39	15	38.4
MICHIGAN	Veterans Administration Medical Center (Allen Park)	84	39	46.4
	Oakwood Hospital	85	25	29.4
	Children's Hospital of Detroit	75	27	36.0
	Detroit Receiving Hospital and University Health Center	101	33	32.6
	Harper Grace Hospital, the Grace Hospital Division	62	20	32.2
	Mt. Carmel Mercy Hospital	110	41	37.2
	St. John's Hospital	93	31	33.3
	Hurley Medical Center	77	38	49.3
	St. Joseph Mercy Hospital	79	51	64.5
MISSOURI	St. Louis University Hospital	101	28	27.7
NEW JERSEY	Cooper Hospital Medical Center	123	38	30.8
	Veterans Administration Medical Center (East Orange)	109	41	37.6
	Hackensack Medical Center	84	40	47.6
	St. Barnabas Medical Center	120	46	38.3
	Monmouth Medical Center	120	53	44.1
	Morristown Memorial Hospital	89	30	33.7
	Jersey Shore Medical Center, Inc.	70	58	82.8
	St. Peters Medical Center	72	42	58.3
	Newark Beth Israel Medical Center	79	45	56.9
	St. Michael's Medical Center	98	70	71.4
	University of Medicine and Dentistry of New Jersey University Hospital	510	196	38.4
	St. Joseph's Hospital and Medical Center	132	103	78.0
	Muhlenberg Hospital	53	23	43.3
	Overlook Hospital	99	28	28.2
NEW YORK	Buffalo General Hospital	89	35	39.3
	Buffalo General Deaconess Hospital Division	42	21	50.0
	Erie County Medical Center	130	35	26.9
	Millard Filmore Hospital	88	39	44.3
	Veterans Administration Medical Center, Buffalo	90	29	32.2
	Nassau County Medical Center	266	139	52.2

TABLE 6 (Continued)
COTH HOSPITALS WITH 25% OR MORE OF THEIR ACCREDITED GRADUATE MEDICAL EDUCATION POSITIONS FILLED BY FOREIGN MEDICAL GRADUATES

State	Hospital	Total Number of Residents	Total Number of FMG Residents	Percent FMGs of Total
NEW YORK (Continued)				
	City Hospital Center at Elmhurst	224	137	61.1
	United Health Services	54	17	31.4
	Winthrop University Hospital	114	46	40.3
	Long Island Jewish Hillside Medical Center	248	80	32.2
	Beth Israel Medical Center	290	79	27.2
	Booth Memorial Medical Center	118	72	61.0
	Bronx Lebanon Hospital Center	187	157	83.9
	The Brookdale Hospital Medical Center	227	122	53.7
	The Brooklyn Hospital Caledonian Hospital	153	142	92.8
	Cabrini Medical Center	92	61	66.3
	Catholic Medical Center of Brooklyn and Queens, Inc.	147	110	74.8
	Harlem Hospital Medical Center	284	150	52.8
	Kings County Hospital Center	535	289	54.0
	Maimonides Medical Center	176	108	61.3
	The Methodist Hospital	118	118	100.0
	Metropolitan Hospital Center	254	179	70.4
	Our Lady of Mercy Medical Center	85	69	81.1
	St. Lukes Roosevelt Hospital Center	438	120	27.3
	State University of New York, Brooklyn	148	47	31.7
	Veterans Administration Medical Center (Brooklyn)	98	27	27.5
	Veterans Administration Medical Center (Bronx)	112	40	35.7
	St. Mary's Hospital	35	24	68.5
	St. Vincent's Medical Center of Richmond	92	82	89.1
	State University of New York, Stony Brook	316	94	25.0
	State University of New York, Upstate Medical Center	192	48	25.0
	Westchester County Medical Center	229	95	41.4
OHIO	Cleveland Metropolitan General/ Highland View Hospital	206	77	37.3
	Veterans Administration Medical Center	57	17	29.8
	St. Luke's Hospital	68	39	57.3
	Kettering Memorial Hospital	60	15	25.0
	St. Elizabeth's Medical Center	86	39	45.3
	The Youngstown Hospital Association	118	42	35.5
OKLAHOMA	City of Faith Hospital	43	13	30.2
PENNSYLVANIA	Mercy Catholic Medical Center	93	35	37.6
	Harrisburg Hospital	33	12	36.3
	Conemaugh Valley Memorial Hospital	55	40	72.7
	Episcopal Hospital	40	16	40.0
	Shadyside Hospital	70	31	44.2
	St. Francis Medical Center/ St. Francis General Hospital	89	54	60.6
	The Western Pennsylvania Hospital	90	27	30.0
RHODE ISLAND	The Memorial Hospital	57	22	38.5
TENNESSEE	Veterans Administration Medical Center	41	16	39.0
	George Hubbard Hospital	88	28	31.8
VIRGINIA	The Fairfax Hospital	72	22	30.5
WEST VIRGINIA	Ohio Valley Medical Center	44	17	38.6
WISCONSIN	Children's Hospital of Wisconsin	38	10	26.3
TOTALS		12,936	5,901	45.6

Source: Adapted from the *COTH Directory 1986 Educational Program and Services*, Association of American Medical Colleges.

care to the indigent. One organization testified that greater financial resources were needed for this purpose, particularly in those States with a recognized high dependency on training programs for the provision of care to the indigent. Other organizations commented on the interrelationship of programs and policies addressing manpower development, educational financing, and health care delivery. They noted that health care available to the underserved could very well be adversely affected by any contemplated cutbacks in manpower availability (e.g., reduction in resident hours, reduced or eliminated Medicare support for the residency training of FMGs, or cutbacks in GME financing generally). In this regard, suggestions were advanced either to resist cutback policies or to recommend policies with phased-in implementation to ensure minimal disruption to the provision of health care services.

The issue of Medicare support for FMG residents frequently arose in testimony addressing priorities to be applied to any cutbacks in Medicare support for GME. Some organizations testified directly and unconditionally that there should be a phased elimination of public financial support from patient care revenues for GME for FMGs. A number of organizations advanced the position that the first priority for Medicare funding should be given to graduates of medical schools accredited by the LCME or the American Osteopathic Association. If adequate resources were not available, these organizations testified that it would be appropriate to gradually withdraw support for GME of FMGs, both aliens and U.S. citizens. A gradual withdrawal was advanced as a moral obligation to existing residents and as a policy to avoid or minimize adverse impact on health services delivery (in the settings heavily dependent on FMGs for such care).

Maintenance of Levels of Service

Fifteen FMG-dependent institutions were visited as part of the studies referred to above.[22] Evidence collected at the sites strongly suggests that most of the institutions would be unable to maintain current levels of service if Medicare support for FMGs in GME were reduced or eliminated. The analysis further suggested that the effect of service reductions due to a loss of FMGs from the system would be felt disproportionately by Medicare and Medicaid beneficiaries, children, the uninsured working poor, and the indigent—in short, those who, on an average, tend to live in inner-city urban areas where the majority of the Nation's FMG-dependent hospitals are located. As in the analysis of data from the larger cohort of hospitals, these 15 showed significantly higher percentages of inpatients who are Medicare or Medicaid beneficiaries; for the outpatients, the relative differences were even more striking.

Another study commissioned to analyze the role of FMGs in the provision of care to the medically indigent and poor [23] found:

- Less than one percent of the metropolitan statistical areas (MSAs) are dependent on FMGs for the provision of medical care to their indigent and Medicaid populations.
- FMG-dependent MSAs are in areas of the country, or encompass inner-city areas, that are seriously economically disadvantaged and have other features such as low income, drug traffic, high unemployment, etc. that make them unattractive to U.S. medical school graduates.
- Fifty-six percent (44 hospitals) of COTH "disproportionate share" hospitals [*] in the 28 study MSAs were dependent on FMGs for the provision of medical care to the indigent and poor. While the exact impact of a reduction in current service providers is uncertain, the study of the disproportionate share hospitals found that other providers in these communities, including private hospitals, office-based physicians, and managed care systems where they exist, have not been willing and/or are not economically able to share the burden of the indigent or Medicaid patients.

Evidence collected during the "disproportionate share" hospitals study also found that a small number of institutions in a small number of locations (considering the size of the United States) would be unable to maintain their current level of services if Medicare support for FMGs in GME were reduced or eliminated. The evidence further indicated that the ambulatory care services would be the first to be reduced and the most severely affected because hospitals consider these services to be nonessential.

CONCLUSION D-1. UNLESS ALTERNATIVE SYSTEMS FOR PROVIDING CARE ARE ESTABLISHED FIRST, EXCLUSION OF FMGs FROM GME PROGRAMS WILL REDUCE THE ABILITY OF A SMALL NUMBER OF HOSPITALS TO PROVIDE CERTAIN ESSENTIAL HOSPITAL-BASED MEDICAL SERVICES. THESE HOSPITALS SERVE A DISPROPORTIONATE SHARE OF THE POOR. AMBULATORY SERVICES WILL BE MOST IMMEDIATELY AND SEVERELY IMPACTED.

CONCLUSION D-2. NONPHYSICIAN HEALTH CARE PROVIDERS CAN PERFORM SOME OF THE TASKS NOW PROVIDED BY FMG RESIDENTS. HOWEVER, THE DEGREE TO WHICH THIS CAN BE ACCOMPLISHED VARIES MARKEDLY DEPENDING ON THE NATURE OF THE SPECIALTY AND THE LEVEL OF CARE BEING PROVIDED.

Selected medical tasks performed by residents can be provided by nonphysician health care providers. However, the extent of this substitutability by specialty is not definitively known. Based on limited information, gathered from training programs with large ambulatory and inpatient care populations, this substitution can range from no substitution to 90 percent, depending on the specialty, the levels of care being provided, the population served, and the level of technology used in the specialty.

Although the vast majority of the respondents at the 15 FMG-dependent institutions visited[22] believed that only a U.S. medical graduate or an attending physician could amply substitute for an FMG resident, many indicated that a nurse practitioner, physician assistant, or other health care professional could perform between 10 and 40 percent of a resident's patient care duties.

There was some indication that the direct patient care responsibility of a resident's training was relatively low in certain specialties such as pathology and diagnostic and therapeutic radiology, permitting relatively straightforward substitution with technicians. However, in other specialties such as neurology, obstetrics and gynecology, surgery, family medicine, and internal medicine, the patient care responsibility of the resident was proportionally higher, making straightforward substitution with nonphysicians more difficult.

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[*] A hospital with at least 25 percent of its gross revenue attributed to bad debt, charity, and Medicaid line items. Based on hospital-reported data from the 1986 AHA *Annual Survey of Hospitals*.

The FMG-dependent hospital study found that the net cost of replacing services provided * by FMG residents would be greater than $10,000 in more than 90 percent of the instances for the 15 institutions studied. Net replacement costs per resident tended to be lowest in specialties in which a significant portion of a resident's patient care activities could be replaced easily by health care professionals other than attending physicians, and highest when such substitution is difficult. Pathology appears to be the one specialty in which it would be cost-effective to replace the patient care services provided by FMG residents. This is attributed, in part, to the large proportion of time devoted by the pathology residents to education in their specialty.

Substitution with full-time medical staff was also suggested. The increasing intensity and concentration of very ill patients in the secondary and tertiary level teaching hospitals may require fully trained medical staff in addition to nonphysician substitutes. Substitution of residents' services by fully-trained physicians and other care providers has been successfully implemented in at least one large inner-city teaching hospital.[24] This has, however, been possible only because the hospital has absorbed the extra costs associated with the shift from educational sources of payment to hospital sources. However, as mentioned in the report of the Subcommittee on Physician Manpower, most of the researchers who have studied the effects on geographic dispersal of physicians as supply expands have concluded that, no matter how large the physician pool expands, there are many rural and urban areas that remain unattractive to physicians for both economic and lifestyle reasons. Many, but not all, of the FMG-dependent hospitals are located in these less desired areas.

The testimony received at the public hearing was mixed on the matter of alternative care provision by nonphysician health care providers. The issues and interplay between cost effectiveness and cost benefits of substitution have not been fully explored. Although some organizations and individuals testifying described the potential use of physician assistants as care providers, the issues of cost effectiveness, cost benefits, supervisory involvement, accountability for care provided, and availability of substitutes have not been assessed in any depth.

In summary, substitution, when possible financially, may be difficult to implement because of environmental issues, limited availability of nonphysician providers, and uncertainty about the kinds of medical services that can legally be delegated to nonphysicians. In the final analysis, given what is known about the role played by FMGs in residency training with respect to delivering necessary medical care, the Subcommittee has endorsed the view that any action designed to reduce their presence should not be taken precipitously and should be pursued with moderation. The following recommendations of the Subcommittee are consistent with this approach:

Recommendation 8. **If the Federal Government and/or the private sector were to develop policies which would reduce the number of FMGs in GME, alternative systems for delivering hospital-based medical care should be established in advance for those FMG-dependent hospitals which serve a disproportionate share of the poor.**

Recommendation 9. **If policies are adopted which would reduce the number of FMGs in GME, consideration should be given to the following to minimize major disruption to provision of health services:**

- **a. A transition period should be allowed to enable hospitals to make necessary adjustments in GME programs. Temporary waivers from such reductions should be provided for programs which offer high-quality education and provide primary care in an underserved area or are serving a large indigent population, because these programs may require more time to increase the complement of alternative full-time health care providers.**
- **b. Federal and State Governments and the private sector should provide financial incentives (e.g., educational loan repayment, bonus for tenure, partial payment of malpractice insurance) to assist hospitals in replacing FMG residents with full-time physicians, residents who are graduates of U.S. medical schools, or other appropriate health care providers.**

Education Versus Service Needs

CONCLUSION D-3. NO MATTER HOW PROBLEMATIC, SERVICE DEMANDS SHOULD NOT FORM THE BASIS OR RATIONALE FOR GME PROGRAMS.

The Subcommittee was concerned about the extensive reliance on GME for delivery of essential care in selected settings. The Subcommittee is of the opinion that, however problematic to resolve, care for the poor should not form the basis or rationale for GME programs. Although educational quality need not be compromised solely by the existence of high volume, it can be negatively affected by the intensity and dominance of the demand. Neither the medical care needs of the population nor the educational needs of the physician-in-training is well served in such an environment.

A number of the organizations testifying at the public hearing commented that the integrity of residency educational programs needed to be safeguarded, and advised that programs whose principal functions have become the staffing of institutional clinics should be reduced or eliminated. In the context of the competing demands for educationally sound training and medical care *per se*, at least one State (New York)[25] and one department (internal medicine) in a busy inner-city hospital (Detroit Medical Center)[24] have either proposed or implemented changes that separate the service needs of hospitals from the educational requirements of residency training programs.

The Subcommittee recognizes that solutions to this problem will not be easy. Evidence in the literature point to the difficulties of attracting adequate numbers of U.S. medical school graduates or fully trained doctors who can serve as attendings at sites that are located in economically marginal communities, are publicly operated, and have limited affiliations with medical schools.[26] These problems include (1) problems in the conditions of work, such as shortages of nurses, supplies, and equipment; excessive workloads; inadequate supervision/support; and lower salaries; (2) problems in living conditions, such as unattractive locations, unavailability of adequate housing and transportation, lack of personal security, and fewer environmental amenities; (3) educational problems, such as lower quality of the teaching program; and (4) negative perceptions of the care system for the poor. There is thus the probability that the institutional maldistribution of U.S. medical school trained house staff and/or attendings will increase in the expected keen competition for U.S. medical graduates should FMGs' presence in GME be reduced.

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* In arriving at the net replacement costs, the savings derived from reductions in time spent by attendings in supervising and teaching residents together with the average compensation of the resident and the estimated indirect cost of GME per resident were subtracted from the estimated gross cost of replacing the services provided by one FMG resident.

> ***Recommendation 10.*** **The Federal Government and the private philanthropic sector should provide resources to study alternative teaching/service models in service intensive settings, including demonstration projects. The private sector medical education and accrediting system should provide incentives for implementation of these alternatives and conduct assessments of the educational quality of the new models. Successful models should be shared with the medical community and institutionalization of these models encouraged.**

Utilization of Nonphysician Manpower

In view of the expected difficulties of staffing some hospitals with physician manpower, the Subcommittee discussed the potential use of physician assistants for provision of some components of care. Although, as indicated above, the issues and interplay between cost effectiveness and cost benefits of substitution have not been fully explored, the Subcommittee was of the opinion that physician assistant education should be encouraged, and made the following recommendations:

> ***Recommendation 11.*** **Eligibility for Government grants for physician assistant education programs should be expanded to include education for hospital-based practice.**
>
> ***Recommendation 12.*** **Eligibility for loans from the Health Education Loan Program (HEAL) should be expanded to include physician assistants.**

E. FOREIGN MEDICAL GRADUATES AND INTERNATIONAL RELATIONS

The training of FMGs has implications for U.S. relations with other countries. This is particularly true of potential educational policies adopted at the national level that might affect the numbers of international exchange physicians receiving training in the United States.

CONCLUSION E-1. IT IS LIKELY THAT GME PROGRAMS WHICH HAVE TRADITIONALLY PROVIDED TRAINING FOR EXCHANGE VISITOR PHYSICIANS WHO RETURN TO THEIR HOME COUNTRIES WILL HAVE TO REDUCE THEIR EFFORTS IF FOREIGN PHYSICIANS ARE EXCLUDED FROM STIPEND/SALARY REIMBURSEMENTS.

CONCLUSION E-2. SOME COUNTRIES SEEKING U.S. ASSISTANCE FOR DEVELOPMENT OF THEIR PHYSICIAN MANPOWER ARE FINANCIALLY ABLE TO SUPPORT THESE EFFORTS: OTHERS, WITH FEWER RESOURCES, ARE NOT. PARTICIPATION IN THE EXCHANGE VISITOR PROGRAM OF THE UNITED STATES BY PHYSICIANS FROM THIS LATTER GROUP OF COUNTRIES HAS BEEN STEADILY DECREASING IN THE LAST DECADE.

The profile of entrant exchange visitors has changed dramatically over the past 10 years (Table 7). In the mid-1970s, relatively large numbers of physicians came to this country annually to pursue GME (e.g., about 1,600 entrants in academic year 1975-1976). In the late 1970s, they dropped precipitously (e.g., 296 in 1978-1979). However, the numbers have been rising slowly since 1982 (e.g., there were 868 new entrants in academic year 1986-1987). However, participation from different parts of the world has also changed. From 1980 to 1985, participation has increased from the Western developed countries (e.g., Canada, Australia, and Great Britain) and decreased from several of the large, low-income countries (e.g., India and China). Countries in Africa, Central America, South America, and the Pacific/Oceania area, which always had small numbers of entrants, showed relatively large reductions in numbers of entrants (Table 8).

Table 7
ECFMG-Sponsored Exchange Visitor FMGs: New Entrants and Total Sponsored, Academic Years 1975-1976 to 1986-1987

Academic Year	New Entrants	Total FMGs Sponsored *
1975-1976	1,628	7,389
1976-1977	1,196	5,311
1977-1978	901	3,660
1978-1979**	296	2,557
1979-1980	442	2,020
1980-1981	666	1,890
1981-1982	544	1,552
1982-1983	508	1,626
1983-1984	598	1,678
1984-1985	719	1,197
1985-1986	799	1,916
1986-1987	868	2,534

* Total sponsored = new entrants + continuations from prior year.
** First year that basic medical knowledge examination was required for new entrant alien FMGs.
Source: Educational Commission for Foreign Medical Graduates, 1988.[37]

The Subcommittee heard extensive testimony regarding the strong possibility that U.S. relations with foreign countries will be harmed if educational opportunities for international exchange visitors are reduced as a by-product of a general reduction in GME financing. Although recent collaboration in the private sector has resulted in the initiation of some private scholarships, it is small in comparison with the amount of funding received through third-party payers. There are no alternate resources of that magnitude projected for the near future that would supplant the current level of funding for exchange visitor physicians in GME programs.

Table 8
Number and Percent of New Entrant Exchange Visitors by World Development Indicators: 1980-1981 and 1984-1985

Country	Number and Percent of New Entrant Exchange Visitors				Percent of Change
	1980-1981		1984-1985		
Top 10 Developed *	No.	%	No.	%	
Canada	156	24.1	164	23.8	+ 5.13
Other (9)	158	24.5	162	23.5	+ 2.53
Subtotal	314	48.6	326	47.4	+ 3.82
Top 10 Developing *					
Philippines	76	11.8	46	6.7	− 39.47
India	41	6.3	27	3.9	− 34.15
Lebanon	27	4.2	28	4.1	+ 3.70
Republic of China	16	2.5	8	1.2	− 50.00
Thailand	12	1.9	7	1.0	− 41.67
Pakistan	12	1.9	12	1.7	—
Nigeria	7	1.1	7	1.0	—
Ghana	7	1.1	2	0.3	− 71.43
Korea	5	0.8	10	1.5	+ 100.00
Peru	4	0.6	14	2.0	+ 250.00
Subtotal	207	32.0	161	23.4	− 22.22
All Other Countries (50)	125	19.3	201	29.2	+ 60.80
GRAND TOTAL ALL COUNTRIES	646	100.0	688	100.0	+ 6.50

* The world development indicators are those used by the World Bank in its *World Development Reports*. The World Bank uses the country's gross national product (GNP) per person as the basis for its classifications.

Sources: Data on Entrants from the Educational Commission for Foreign Medical Graduates and Data on World Development Indicators adapted from the World Development Report, 1984.[28, 29]

Information gathered in 1984 from several sources[30] reveals that the Union of Soviet Socialist Republics and eastern bloc Communist nations admitted and fully supported large numbers of foreign students for medical education (e.g., approximately 1,200 Jordanians, 500 Ethiopians, 345 Panamanians, 575 Colombians, 200 Dominicans, 50 Grenadians, and 7 Ecuadorians). Among the 17,300 students enrolled in Cuba's 21 medical schools in 1983, 1,743 (10 percent) were foreign students, all receiving free medical education.

Arguments for continuing to provide financial assistance at the Federal level for essentially foreign relation purposes often focus on our relations with developing countries, many of which have considerable financial problems. A study conducted in 1985 of nine developing countries found that apart from Saudi Arabia, all had considerable financial problems.[31] These included high levels of inflation and difficulties with foreign debt repayments. This contributed to restrictions on exit visas and foreign exchange, with implications for overseas training. All of these countries have medical training facilities of their own. These facilities are generally thought to be adequate at the undergraduate level, but assistance is required at the graduate level. Most countries are trying to improve their own facilities and often have very talented professors, but there are limited training opportunities and teaching materials—books, equipment, etc. Although the trend in these nations is for medical students to train in their own or nearby countries, specialty training in the United States is recognized as desirable, and there is a continuing need for it.

At the public hearing interest was consistently expressed in continuing an international exchange visitor program of one form or another. Some suggestions were offered that a funding source separate from Medicare might be appropriate for this purpose (e.g., foreign aid account; separate FMG educational account).

Organizations generally argued for a continuation of support for a limited number of foreign physicians coming to the United States for training and then returning to their countries. The reasons cited included opportunities for exchange of ideas, enriched educational experience for both Americans and exchange visitors, advancement of science, and foreign policy imperatives.

> *CONCLUSION E-3. THERE IS A NEED TO EXPAND AND MODIFY THE EDUCATIONAL OPPORTUNITIES FOR EXCHANGE VISITOR PHYSICIANS TO BETTER MEET THE HEALTH CARE DELIVERY REQUIREMENTS OF THE HOME COUNTRY AND TO ENHANCE RELATIONS WITH DEVELOPING COUNTRIES.*

A number of studies and workshops conducted over the past few years were designed to look in more depth at the value of providing study opportunities in the United States to exchange visitor physicians from developing nations.[32] Their findings reflected the view that GME is greatly valued by participants, but that the needs of the exchange visitors' home countries were often not met.

More specifically, two studies conducted in 1985 [33] and 1986 [34] questioned the adequacy of the U.S. GME system for meeting the needs of developing countries, which have relatively limited health care resources. The first study found that while U.S. GME programs are acknowledged as excellent, it would be desirable if programs took into consideration the practice environment the physician would be entering upon returning to his or her home country. They also recommended that the medical content area be expanded to include courses on tropical diseases and that short-term fellowships that would provide specialty skills training be considered. The second study found that GME in the primary care disciplines is probably best conducted in the home country or in special U.S. programs experienced in this effort. When the ultimate purpose of the training was the delivery of primary care services, it was felt that home country training was more appropriate because candidates and teachers would be using the technology and care systems available in that country.

The Subcommittee heard testimony from a number of organizations that sponsor alternative training programs for exchange visitors. Described below are several examples of ongoing alternative training programs:

- The United States Department of Treasury and the Ministry of Finance for the National Economy in Saudi Arabia have entered into a technical cooperative agreement. One of the programs designed under this agreement assists ECFMG certified Saudi Arabian physicians to qualify for and obtain specialty board certification in the United States.

- The ECFMG administers several international exchange programs. One, the Selected Opportunities in Advanced Short-Term Training (SOAST), provides a limited number of physicians an opportunity to participate in observation, consultation, teaching, or research. These programs are limited to three years in duration and the exchange visitor must be under the direct supervision of a licensed physician. The ECFMG also sponsors the Foreign Faculty Fellowship Program in the Basic Medical Sciences. This program is designed to enhance the skills of the faculty member at the undergraduate level.
- The Centers for Disease Control and Emory University School of Medicine, Department of Community Health, are cooperatively sponsoring an epidemiology training program based in Taiwan. This is a preceptorship program that provides close supervision of trainees as they work on problems in the community. The program is designed to train individuals who can assume positions in their Government at any level.
- The Interamerican College of Physicians and Surgeons (ICPS) sponsors a short-term fellowship program for Latin American physicians. This program provides an opportunity for bilingual practitioners in the United States to serve as preceptors for the Latin American physicians. The ICPS, in collaboration with volunteer preceptors, designs a specific training program that meets the identified objectives of the trainee and his or her country.

The Subcommittee received testimony concerning plans for an International Medical Scholars Program (IMSP). The goal of the IMSP is to provide postgraduate educational opportunities in the United States to foreign national FMGs who show promise and/or have the potential to be future leaders in their countries. IMSP expects to provide 1,500 exchange opportunities per year in the medical sciences, health administration, and public health. IMSP will provide an opportunity for designing tailored programs that would meet the needs of the individual and his or her country. Although traditional residency programs will not be precluded, the intent of the IMSP program is to broaden opportunities other than traditional GME. It proposes to seek funds in the public and private sectors.

Several organizations testifying at the public hearing also indicated that exchange visitor experiences for physicians should be broadened to encourage private organizations participation and experience outside of traditional GME, e.g., preceptorships with practitioners. One organization testified that one of the major and more significant criticisms of the continued use of GME for educating exchange visitor physicians has been that skills acquired in the high-technology tertiary health care center of the United States cannot be easily transferred to some of the exchange physicians' home settings. It was also proposed that the United States consider establishing a "true" International Health Service Corps in which exchange visitor physicians trained in the U.S. medical care system could participate. This experience would allow them to share their American training with others in the developing nations under U.S. sponsorship.

One of the perplexing issues associated with the exchange visitor program has been the undermining of the principal intent of the program, i.e., the physician's return to his or her country after educational experiences in the United States. Individuals entering the United States for training under a J visa must return to their home countries for a 2-year period before they can immigrate to this country under nonvisitor status. Information presented to the Subcommittee suggests that this interval may be too short. The research literature available on FMGs' return home is limited. One study, conducted prior to the visa restrictions imposed by law in 1976, found that fewer than 30 percent of the FMGs entering the United States for GME planned to stay at the point of entry.[14] However, this figure increased to 75 percent during GME.

It is speculated that the socialization and acculturation process experienced by the foreign physician while studying in the United States often contributes to the disassociation from the home country. While, psychologically, this may be beneficial for successful physician interactions and adjustment within the United States, it is not conducive to successful reacculturation to their home country. Therefore, the Subcommittee believes that a longer time interval may be necessary between GME and eligibility for immigration under nonvisitor status.

> *Recommendation 13.* **Exchange visitors in traditional GME should continue to be supported like all other participants in GME. Patient care funds should continue to support the proportion of activities that actually provide patient care. Home country support, the trainee's own funds, foreign aid funds, or other sources of support should be used for nontraditional educational experiences of the exchange visitor.**
>
> *Recommendation 14.* **To encourage reestablishment in the home country, the two-year return home requirement should be modified to increase the number of years to five. This would contribute to a longer period of time for reacculturation before reentry into the United States is possible.**
>
> *Recommendation 15.* **The public and private sectors should support the efforts underway to implement the International Medical Scholars Program. This support should be both monetary and programmatic.**
>
> *Recommendation 16.* **Training in traditional GME may not be appropriate for many exchange visitors. Although a number of alternative programs exist at the present time, additional programs should be developed. All appropriate bodies, both in the public and private sectors, should assist with the development of programs which would be broader than or different from classic clinical training. Although more expensive (but probably more effective), training assistance should be conducted in settings which involve both the home country and the United States. Funding resources for this effort should be sought from the U.S./home country governments, international corporations, and private foundations.**

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Report of the Subcommittee on Graduate Medical Education Programs and Financing

INTRODUCTION

Charge

The general charge to the Subcommittee on Graduate Medical Education Programs and Financing (the Subcommittee) calls for advice and recommendations on appropriate Federal policies regarding changes in the financing of undergraduate medical education and graduate medical education (GME) and in the types of medical education in GME programs. The legislation authorizing the overall Council indicates that teaching hospitals, medical schools, and accrediting bodies are to be encouraged to conduct activities voluntarily to achieve the recommendations of the Council. This aspect of the legislation is relevant to the work of the Subcommittee as well.

For this first report, the Subcommittee chose to focus its attention primarily on the financing of ambulatory and primary care training. Because of time and data limitations, the Subcommittee relied on existing data, information, and studies presented in Council and Subcommittee meetings and at the public hearing of November 19-20, 1987.

Issues

Shortly after the Council was formed, each subcommittee developed a list of issues which were subsequently approved by the plenary Council. The following are the issues for the Subcommittee on GME Programs and Financing. Limitations on the availability of time and data resulted in the Subcommittee's focusing on the issues marked with asterisks.

*1. What should be paid for in graduate medical education?
   *a. How should direct graduate medical education costs be financed?
   b. How should the financing of faculty be handled?
   *c. What should be incorporated into indirect teaching adjustments?
*2. What are appropriate sources for financing graduate medical education? Should the Federal Government fund graduate medical education? If so, how and to what degree?
*3. Should graduate medical education costs be separately identified at all, or should they be integrated into payment for services?
*4. Who should receive payment for graduate medical education, e.g., hospitals, ambulatory care settings, practice groups, residents, etc.?
*5. How should funding of graduate medical education costs for foreign medical graduates be handled? How should funding of graduate medical education costs for international exchange visitors be handled?
*6. If it is desirable to increase the emphasis on teaching in noninpatient settings, how should medical education be financed in ambulatory or other noninpatient settings?
   *a. What can be done in graduate and undergraduate medical education to provide incentives and eliminate barriers to increased teaching in noninpatient settings?
   b. What is the role of the public versus the private sector in achieving these objectives? What steps should be taken by academic health centers?
7. What choices should be made in regard to numbers of years of residency training? Who should make the choices and how should they be made?
8. Should the numbers and types of physicians trained be largely guided by the health care delivery needs of individual facilities, or by national manpower considerations?
9. What is the relationship between the delivery of health care for the poor and graduate medical education?

Strategy

The Subcommittee met on March 17, June 29, September 2, October 5, and November 20, 1987, and February 17, 1988. The brief November 20, 1987, meeting followed the public hearing. For all but the last meeting, the Subcommittee received selected authoritative materials and heard and discussed the following expert presentations germane to the subject:

Presentations Made to the Subcommittee on Graduate Medical Education Programs and Financing

Presenter	*Topic*
March 17, 1987	
Judith R. Lave, Ph.D. University of Pittsburgh	Overview of Financing Graduate Medical Education
Robert M. Heyssel, M.D. Johns Hopkins Hospital	Commonwealth Fund Report on Task Force on Academic Health Centers
Stuart G. Schmid, Ph.D. U.S. Dept. of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation	Arthur Young Study on Financing GME
Charles Booth U.S. Dept. of Health and Human Services, Health Care Financing Administration, Bureau of Eligibility, Reimbursement and Coverage	Medicare Financing of GME

(Continued)

Presenter	*Topic*
Susanna Ginsburg and Jol Ann Todd formerly Mandex Corporation	Medicaid Financing of GME
Ann Peterson, M.D. American Medical Association	GME in the United States
Frank A. Riddick, Jr., M.D. Accreditation Council for Graduate Medical Education	Accreditation of GME Programs
Donald G. Langsley, M.D. American Board of Medical Specialties	Board Certification
June 29, 1987	
Lawrence C. Morris Blue Cross & Blue Shield	Private Health Insurance Plans in the Financing of GME
John K. Kittredge The Prudential Insurance Co.	
Laird Miller Health Systems Management, Inc.	
Malcolm L. Peterson, M.D. Veterans Administration	Veterans Administration Involvement in GME
Richard M. Knapp, Ph.D. Association of American Medical Colleges	Teaching Hospital Financing of GME
Michael T. Opipari, D.O. Horizon Health Systems	Financing GME in Osteopathic Teaching Hospitals
Ronald P. Kaufman, M.D. George Washington University Medical Center	Faculty Practice Plans in GME and Medical Center Governance and Operations
Arnold L. Brown, M.D. University of Wisconsin Medical School	Faculty Practice Plans and GME
John F. Kasonic, Ph.D. Executive Consulting Group, Inc.	
W.E. Mayberry, M.D. Mayo Clinic	
Albert P. Williams, Ph.D Rand Corporation	
September 2, 1987	
	Financing Primary Care and Geriatric Medicine GME Programs
Jack Colwill, M.D. University of Missouri-Columbia	Financing of Family Practice GME Programs
John Eisenberg, M.D. Hospital of the University of Pennsylvania	Financing of General Internal Medicine GME Programs
Fredric D. Burg, M.D. University of Pennsylvania School of Medicine	Financing of General Pediatrics GME Programs
L. Gregory Pawlson, M.D. George Washington University Center for Aging	Financing of Geriatric GME Programs
Gerard F. Anderson, Ph.D. Johns Hopkins Medical Institute	Reactor
J. Michael Watt Lewin and Associates	Discussion Paper on the Costs and Financing of GME
October 5, 1987	
Nancy Seline Association of American Medical Colleges	Study of the Experience of Academic Medical Centers in Transition to Ambulatory Teaching Settings
Leonard Katz, M.D. SUNY-Buffalo School of Medicine	Health Maintenance Organizations in Undergraduate and Graduate Medical Education
Elliott S. Wolfe, M.D. Stanford University and Kaiser Foundation Health Plan	The Experience of Kaiser and Stanford Medical School in Undergraduate and Graduate Medical Education
T. Glenn Hammons, M.D. Physician Payment Review Commission	Activities of the Physician Payment Review Commission
Craig K. Lisk Congressional Budget Office	Medicare Policy Options for Financing GME
Jack Hadley, Ph.D. Georgetown University School of Medicine	Commentary on J. Michael Watt's Discussion Paper on the Costs and Financing of GME

CONCLUSIONS AND RECOMMENDATIONS

A. OVERALL FINANCING OF GRADUATE MEDICAL EDUCATION

The Subcommittee reviewed the overall process of financing GME, the financing of primary care, and Medicare financing of direct and indirect costs of medical education. The process of financing GME is complex, with extensive and highly varied interrelationships among third-party payers, medical schools, teaching hospitals, and other involved parties.

While the trend appears to be a gradual erosion in support for the financing of GME, and perhaps a decline in the level of funding from some sectors, information and testimony reviewed by the Subcommittee indicated that currently there is not a crisis and that there is no compelling need for major change at this time. Furthermore, the Subcommittee is of the view that the complexities and interrelationships of financing GME argue for an evolutionary and incremental approach to change.

> *CONCLUSION A-1. THE FINANCIAL SUPPORT FOR GRADUATE MEDICAL EDUCATION IS ERODING AS PAYMENTS FOR PATIENT CARE ARE CONSTRICTED. IT IS NOT CLEAR WHAT SUBSTITUTE SOURCES, IF ANY, ARE DEVELOPING TO TAKE THEIR PLACE.*

Although it is not in crisis today, and indeed could continue its present course, support for the financing of GME is gradually eroding. GME financing under Medicare has become vulnerable to Federal and State budget reductions; Congress has applied prospective limits to cost increases in Medicare-funded direct medical education, and has reduced and may further reduce the indirect medical education (IME) adjustment rate. Medicaid has increasingly constrained payments in many States.

This vulnerability is also present in the private sector, where health maintenance organizations (HMOs) and preferred provider organizations (PPOs) are negotiating discounts from hospital charges in many markets. It is important to note that there are no national data from the private sector on financing GME, and there are no firm indications whether either these amounts or the total are either increasing or decreasing.

In all, there is uncertainty about what form GME financing should take and what the future holds for it. At the same time, the need for shifts in training to ambulatory settings appears to have sharpened recognition of disincentives to such shifts in the current GME financing system.

GME Financing

GME is carried out by accredited programs, which are usually based in teaching hospitals. The major source of financing of GME is payments to these hospitals, and to some extent to physicians, for patient care. A portion of some medical school revenues also finances GME. Support for faculty comes largely from payments for physician services, but because faculty in academic medical centers teach in both undergraduate medical education and GME, it is not possible to provide a net estimate of total expenditures for GME alone.

The hospital costs of GME have been broadly categorized by Medicare as "direct costs"—those directly allocable to GME activities such as salary and fringe benefit costs of interns and residents, faculty costs, and other administrative and operational expenses—and "indirect costs," or the increases in hospital operating costs associated with the presence of GME in a teaching hospital.

The primary component of direct GME costs is the cost of salaries and fringe benefits to interns and residents. An estimated 80.7 percent of these stipends and benefits was offset by patient care revenues in teaching hospitals (excluding Veterans Administration (VA) hospitals) that were members of the Council of Teaching Hospitals (COTH) of the Association of American Medical Colleges (AAMC) in 1985-1986.[1] Across all teaching hospitals, approximately 85 to 90 percent of these costs have been offset by such payments.[2] No comparable data are available on sources or breakdowns of indirect costs.

Table 1 is presented primarily to display critical gaps in information on GME financing in the United States. Because of the gaps and the varying and noncomparable sources for these data, only the Medicare direct and indirect cost figures can be added. The table displays the following: (1) estimates of the amount of Medicare funding of both direct and indirect costs; (2) an estimate of the total funding of GME by State Medicaid programs (no attempt is made to separate either direct and indirect costs or Federal and State shares); (3) an estimate of total direct costs paid by all payers; and (4) an estimate of total resident stipend and benefit costs in the United States.

Table 1
U.S. Expenditures for Graduate Medical Education
Various Years 1986-1988 (in millions)

Category	Medicare *	Medicaid **	Other Third Party and Self	TOTAL
Direct Costs	$ 975	N/A	N/A	$3,900***
(Resident Stipend and Fringe Benefit Costs, Included in Direct Costs)	N/A	N/A	N/A	($2,133) †
Indirect Costs	$2,020	N/A	N/A	N/A
TOTALS	$2,995	$1,000	N/A	N/A

* Source: Health Care Financing Administration, 1988. The direct cost amount represents the 75 percent of total direct cost amount that supports physician GME. Another 25 percent supports nursing and allied health clinical educational programs.[3]

** Source: Estimate for 1986, prepared by Ms. Jol Todd and Ms. Susanna Ginsburg. Based on work performed for the MANDEX, Inc. report, "An Assessment of State Support for Health Professions Education Programs" (January 1987). Medicaid payments for GME in the 19 States for which they had data totaled approximately $489 million. These may include either or both direct and indirect costs depending on the State.[4]

*** Estimate of total national direct costs which was based on an earlier projection of $1.12 billion in Medicare direct costs for 1988.[5]

† Estimate of national total of intern and resident salaries and fringe benefits for 1987-1988 residency training year.[6]

N/A: Not available.

The most notable gap is the lack of information on payments for GME by private third parties and individuals. While the Subcommittee was furnished a gross estimate of $3.9 billion for total direct costs to all payers (based on a previous estimate of Medicare direct costs that differs from the amount shown in the table),[6] not even this broad kind of estimate is available for indirect costs, which, at the national level, only Medicare identifies and reimburses separately. Other payers are, however, likely to pay equivalents to indirect costs through higher costs or payments to teaching hospitals aside from direct cost payments.

Medicare direct cost financing

Under Medicare, direct costs include intern and resident salaries and fringe benefits; teaching physician costs; costs of equipment, supplies, and allocated overhead; and administrative and other program expenses for personnel, space, equipment, and supplies. As Table 1 indicates, the Health Care Financing Administration (HCFA) estimates that Medicare GME direct cost expenditures (excluding payments for nursing and other allied health clinical education) have been estimated at $975 million for 1988.

Medicare indirect cost financing

Indirect costs are the additional operating costs of hospitals associated with the training of interns and residents. Examples of additional costs include the increased use of ancillary services, a greater severity of illness than is accounted for by diagnosis-related groups (DRGs), and the cost of the increased availability of state-of-the-art testing and treatment facilities in teaching hospitals.

Because only Medicare separately estimates direct and indirect costs, estimates of GME costs from payers other than Medicare may include both. Table 1 includes a HCFA estimate of approximately $2.02 billion spent for indirect costs in 1988, for a total Medicare outlay of $3.0 billion for direct and indirect costs in that year. Medicare direct and indirect costs are discussed in greater detail in *"C. Medicare Financing of Graduate Medical Education"* [see page 55].

Faculty Financing

As mentioned above, the financing of faculty supports both undergraduate medical education and GME activities. The amount going to either activity is not known and cannot be estimated without arbitrary allocations. It should be noted that payments for patient care that finance faculty are the same types of payments as are made to physicians for care of patients in nonteaching settings. Available national data for payments to faculty physicians are reported yearly as medical school revenues, although not all such data are reported. These payments represent one of the larger sources of financing for medical schools. The most recent data indicate that approximately $3.77 billion, or about 34 percent of the $11.1 billion in total medical school revenues, came from payments for medical services. Of this, $2.35 billion came from professional fee income.[7]

In most medical schools and some hospitals, payments to physicians frequently go into faculty practice plans (FPPs), which typically serve as mechanisms to structure both the compensation and the practice activities of teaching physicians. Although no firm national data are available on the total amount of such payments, it has been estimated that total income to all FPPs is approximately $1.75 to $3.5 billion, of which about 20 percent, or approximately $350 to $700 million, has been estimated to come from Medicare teaching physician payments.[8] These data only partially correspond with the data on professional fee and medical service income to medical schools, because they do not include all FPP revenues and not all professional fee income is paid into FPPs.

More than one funding stream is available for paying faculty. In many teaching hospitals, there are both payments made to the hospital for faculty supervisory costs (by Part A under Medicare) and payments to faculty for patient care services (by Part B under Medicare). In some teaching hospitals, however, the faculty are salaried employees paid from hospital revenues; these are costs which Medicare and probably others pay to the hospital.

An examination of major alternative methods of financing GME was undertaken by the Subcommittee. The possibility of funding GME from FPPs was reviewed; the Subcommittee concluded that FPPs could not be the sole financing mechanism, as the amounts required were found to exceed the estimated income to these plans. There did not appear to be feasible alternatives of financing from either public or private sources, and the development of separate mechanisms to distribute such funds appeared to be problematic. Accordingly, the Subcommittee sees no generally feasible alternative to the present system of financing GME and believes that the present method continues to be the most desirable.

It should be noted that GME currently appears to have a broad base of financing. As mentioned earlier, most financing of GME is through hospitals, and almost 90 percent of hospital revenue has come from third-party payers—private insurance, Medicare, and Medicaid.[9] The breadth of this financing is suggested by (1) the widespread funding of private health insurance through employer/employee or individual contributions and the funding of government coverage * by Federal, State, and local taxes; and (2) the relatively extensive coverage of the United States population, of which approximately 75 percent had some level of private health insurance coverage and 85 percent had some private and/or government coverage in 1986.[10] Recognizing that there are substantial numbers of under- and uninsured, coverage appears to be substantial for a large portion of those who are insured, as suggested by data showing that 96 percent of employees with private group health insurance surveyed in 1984 had plans covering both inhospital and out-of-hospital services with maximum benefits of $250,000 or more.[11] All but 6.5 percent of private health insurance premiums come exclusively from group coverage of insured individuals or families.[10]

Thus, the great preponderance of payments for inpatient hospital services and therefore GME comes from broadly based third-party financing, even when such cost-sharing as payment of deductibles for hospitalization (which has been increasing in recent years [12]) is taken into account. No data are available on the effects of discounting and other recent private or public sector changes in amounts paid for GME.

Payments for out-of-hospital patient care also appear to have a significant base in third-party financing, if not as extensive as that for hospitals. As discussed earlier, faculty and other medical education support is financed in part by such payments. Both private and public payers preponderantly include coverage for nonhospital physician services,[11] and perhaps half or more of the total of such payments to physicians comes from third parties.[9] Alternative delivery systems include relatively complete coverage of out-of-hospital services.

As noted earlier, the current system of providing funds for GME is complex. There are many payers, and many kinds of payers, in the United States besides the traditional entities of Blue Cross and Blue Shield, commercial insurers, Medicare, and Medicaid. The methods used to pay for GME vary extensively. Only Medicare, some State Medicaid plans, and a few private payers identify explicit amounts paid for GME. The amounts contributed by other payers are difficult to determine, and can be highly variable because total payments presently range from various negotiated levels to full charges. Some payment levels may be too low to be described as contributing to GME.[13]

Introducing any major change to the current system of financing GME is likely to be complex and difficult to implement. For example, a different mechanism for financing GME could require the establishment of mechanisms to (1) to assess and collect funds earmarked for GME from third parties and/or Federal, State, or local governments through public and/or private arrangements; and (2) distribute funds to residents, residency programs, teaching hospitals, medical schools, or other auspices. Such steps could require complicated and controversial arrangements among financing sources, payers, and institutions. In addition, separate funding mechanisms could result in year-to-year fluctuations in amounts collected and distributed, which could lead to difficulties in the planning of teaching programs, and controversy surrounding determinations of current and future needs for numbers of physicians in various specialties. Accordingly, except as modified by recommendations made later in this report, the Subcommittee does not recommend alternative financing mechanisms at this time.

> *Recommendation 1.* **Any changes to the way GME is financed should be undertaken in an evolutionary manner rather than precipitously. To do otherwise would run substantial risk of unanticipated adverse results.**
>
> *Recommendation 2.* **Medicare payments for direct costs of GME should be continued through existing mechanisms, utilizing current sources, conduits and recipients, as modified by later recommendations.**

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* The term "coverage" can refer to either specific or broad kinds of services considered to be reimbursable by a third party, e.g., particular treatments or categories of service such as office visits; and/or to the entitlement of individuals or groups to payments for health care services under a third-party plan.

For reasons elaborated below, the Subcommittee does not believe that the stipends and fringe benefits of residents represent a net additional cost to hospital inpatient care. It therefore recommends that financing for these items be kept intact in payments for patient care. Nevertheless, a request was made by congressional staff during consultations with the Council for a recommendation on what should be protected if it becomes necessary to reduce expenditures for the direct costs of GME. The Subcommittee believes that, if it becomes necessary to reduce financing for GME, priority should be placed on resident stipends and benefits rather than costs such as classrooms and faculty. The Subcommittee believes that the following areas should be sheltered from the effect of any reductions in direct cost support:

- Resident stipends and fringe benefits.
- Training in primary care specialties in short supply.
- Training in geriatric medicine.
- Training in preventive medicine.
- Quality programs in underserved communities.
- Training of minorities.

> *Recommendation 3.* **The Council places the highest priority on reimbursement of residency training stipends and fringe benefit costs, and on training in primary care specialties, preventive medicine, geriatrics, and programs in underserved communities and for training of minorities. Should reductions of direct costs be made, these aspects of GME should be sheltered from the impact.**

B. FINANCING OF AMBULATORY TRAINING AND TRAINING IN PRIMARY CARE AND GERIATRIC MEDICINE

While not advocating major change at this time, the Subcommittee identified a number of concerns that suggest both action and caution. The current system has disincentives for a number of desirable health care education objectives. For example, even though there is a clear shift of practice, and secondarily of training, to ambulatory settings, training appears to be more difficult to finance in ambulatory than in inpatient settings, particularly in specialties whose services are not well reimbursed. The financing base for training in geriatric medicine does not appear to be as firm as that in many other specialty areas for reasons discussed below. Specialties without a hospital base, such as preventive and occupational medicine, appear to have the weakest financing base of all. In summary, although major change may not be in order at this time, the Subcommittee believes that ways should be found to modify the GME financing system to address these priority objectives.

> *CONCLUSION B-1. GRADUATE MEDICAL EDUCATION IN AMBULATORY SETTINGS IS INCREASINGLY NECESSARY IN MANY SPECIALTIES FOR OPTIMAL TRAINING AND PREPARATION FOR PRACTICE. THERE ARE DIFFICULTIES IN FINANCING GRADUATE MEDICAL EDUCATION IN AMBULATORY SETTINGS, RELATED IN PART TO LESSER COVERAGE AND LOWER LEVELS OF PAYMENT BY THIRD PARTIES AND IN PART TO INCREASED PROBLEMS WITH LOGISTICS OF TEACHING IN SUCH SETTINGS. THE CURRENT FINANCING OF GRADUATE MEDICAL EDUCATION RESULTS IN DISINCENTIVES FOR AMBULATORY TRAINING AND LITTLE OR NO SUPPORT FOR NONHOSPITAL-BASED RESIDENCY PROGRAMS SUCH AS PREVENTIVE AND OCCUPATIONAL MEDICINE. THESE FACTORS ARE ESPECIALLY SIGNIFICANT IN THE CASE OF PRIMARY CARE AND GERIATRICS, WHERE PROVIDERS RECEIVE LOWER INCOMES FOR THEIR SERVICES APART FROM THE FINANCING OF MEDICAL EDUCATION.*

Patients are increasingly receiving their health care in ambulatory settings, and inpatient hospital use is declining. As hospitalization becomes increasingly abbreviated, patient care and decision making increasingly take place outside the hospital. Several specialties such as family practice, pediatrics, and dermatology have historically been oriented to ambulatory practice and training, and others, such as ophthalmology and neurology, have been moving their practice and training sites from inpatient to ambulatory settings. A higher proportion of surgical procedures is being performed outside the hospital, and surgical training is following this shift in practice.[14]

However, there are problems in medical education that appear to be of greater magnitude in ambulatory settings. Teaching is more inefficient and costly in ambulatory settings because of increased time demands on faculty and other staff in relation to the volume of care delivered. For example, fewer students and residents can be involved during an ambulatory visit than during a hospitalization. The time spent by patients in receiving care is greatly increased as well, resulting in a reduced volume of patient flow and attendant revenues. Use of attending time is less efficient than time spent in organized hospital rounds; there are greater complexities in adjudicating responsibilities among students, residents, and faculty; and the costs of teaching medical students and residents are clearly higher in the early stages of their training.[15] Medical student teaching in particular increases costs. As a result, ambulatory teaching may be economically disadvantageous in competitive environments.

Because of the trends toward greater use of ambulatory care, inpatient teaching is thought to have deteriorated. Inpatients are sicker and their hospitalization is more hurried than in the past, with less time for teaching. The increasing abbreviation of hospitalization and patient care decision making has limited the scope of both undergraduate medical education and GME, and called into question the adequacy of teaching primarily in inpatient settings.[14, 16-18]

Problems in financing ambulatory care training arise from both cost and revenue considerations. There appear to be both (1) greater costs of ambulatory teaching because of the logistical problems described above and (2) generally smaller revenues to ambulatory training programs. Student and resident services provide a smaller offset to added teaching costs in ambulatory than in inpatient settings.[19] However, there are few studies or data on costs and financing of ambulatory facilities.

Operating cost increases resulting from teaching activities are thought to be significantly greater in ambulatory than in inpatient teaching settings,[20, 21] and to be still greater when medical student teaching is included.[20, 22] It has also been suggested that financial losses sometimes are shown to be increased in hospital outpatient departments because of the willingness of teaching hospitals to treat uninsured and poorly insured patients,[23] and/or allocations of inpatient hospital costs to ambulatory units.[21, 23-25]

With respect to revenues, ambulatory care tends to be reimbursed at lower levels than inpatient care. Specifically, (1) there tends to be less third-party coverage for ambulatory care, in part because many third-party plans do not include certain services such as prevention or counseling; (2) payment levels are frequently lower for services provided in ambulatory settings than for similar or identical services in inpatient settings, e.g., office visits compared with equivalent inpatient visits; and (3) cost sharing has usually been higher for ambulatory services, reducing the amount of third-party income to the outpatient setting (this may be changing as employers cut back on health insurance commitments by increased cost-sharing requirements for inpatient care). In addition, fewer individuals have third-party benefits for ambulatory services.

Medicare also differentiates between ambulatory and inpatient settings in the financing of GME costs. Outpatient GME direct costs are reimbursed at 80 percent of allowable costs, as are outpatient costs in general, while inpatient GME costs are reimbursed at 100 percent (this statement represents a correction from Volume I). On the other hand, the 1986 OBRA authorized Medicare to reimburse hospitals for direct GME costs in nonhospital settings when the hospital incurs such costs. Regulations are currently being developed to implement this authority.

> *CONCLUSION B-2. FINANCIAL INCENTIVES TEND TO PRODUCE A CONCENTRATION IN WHAT MAY BE OVERSUPPLIED SPECIALTIES. THESE INCENTIVES ARE THE RESULT OF (1) DIFFERENTIALS BY SPECIALTY IN REIMBURSEMENTS TO PHYSICIANS FOR SERVICES APART FROM MEDICAL EDUCATION PAYMENTS, AND (2) DIFFERENTIALS BY SPECIALTY IN BENEFITS TO HOSPITALS FOR THE USE OF INPATIENT HOSPITALIZATION AND OTHER HOSPITAL SERVICES.*

The financing of residency training programs can be divided into support for resident compensation, faculty, and other personnel and operational costs. Resident compensation traditionally has come from hospital financing, derived mostly from patient care revenues, while faculty support has come from payments for physician services, hospital salaries, research support, or some combination of these and other sources. The other program costs are usually paid from one or more of these sources, and, particularly for family practice, from public funds, private grants, etc. It should be noted that undergraduate medical education is frequently provided by the same faculty and supporting activities used for GME, and that residents provide considerable teaching to medical students as well. This further emphasizes that financing of medical education inseparably supports both undergraduate and graduate medical education.

Very little has been published regarding the financing of residency training programs. The information available, although limited, strongly suggests problems in supporting GME in the primary care specialties, especially family medicine. One study showed that each of the major sources of financing for family medicine residency programs—physician services to patients, hospital support, and public dollars—provides about one-third of training program revenues. Revenues from physician services to patients amounted to only 21 percent of program costs, and it was thought unlikely that this source could exceed one-third of costs. The authors concluded that one-third of costs must come from some combination of State and Federal sources.[26] A national survey of family practice GME programs in 1981 and 1982 appeared to support that finding. Major sources of program financing were hospital support (35 percent), patient income (31 percent), and public dollars (28 percent). A striking range of income by source was exhibited across the programs, also suggesting that income for this specialty is uncertain and that public funding sources continue to be necessary.[27]

Less information is available on financing GME in internal medicine. A study of costs and financing in a general internal medicine residency at the Harvard Primary Care Program showed that resident fee-for-service billings in affiliated ambulatory settings yielded revenues sufficient to offset 77 percent of total program costs. Even at this level of support from practice income, a 40 percent greater volume of reimbursed services would have been required to cover full program costs, and the authors stated that such an increase would jeopardize the educational goals of their program.[28] For pediatrics, the Primary Care Unit at Harvard found that, during its initial phase, patient care revenue covered 60 percent of costs.[29] In one unpublished study presented to the Subcommittee, the amounts generated per resident in one academic medical center were only $33,000 per resident in the department of family practice, compared with $93,000 in pediatrics, $104,000 in internal medicine, and $187,000 in surgery.[30] There is no published literature that discusses problems in funding residency training programs in nonprimary care specialties.

Geriatric training programs

Geriatric medicine is undergoing a substantial growth and increased demand for trainees, faculty, and programs. Its patient population is the elderly, especially those over age 75. This is an age group that will undergo a major increase over the next 20 years. Geriatrics has become a subspecialty of added qualifications to family practice and internal medicine, and may soon become one in psychiatry. About 100 fellows finish training each year, but it was suggested to the Subcommittee that this is a two- to ten-fold shortfall from the demand.[31]

Information presented to the Subcommittee suggested that there may be problems in financing geriatric medical training: First, only about 10 percent of geriatric fellowships come from hospitals (55 percent come from the VA and 15 percent from private foundations), compared with 40 percent of all internal medicine subspecialty fellowships. Thus, Medicare does not appear to be a major source of financing for geriatrics training although it pays substantial amounts for GME. Other difficulties in financing geriatric medical training include those involving settings outside the hospital, and the lack of a factor in physician reimbursement for the amount of time spent in providing complex nonprocedural services. Second, with increasing proportions of care taking place outside the hospital, education and training are needed in outpatient settings, nursing homes, and homes. Third, geriatric training may be relatively poorly reimbursed for its attending physician services, given such higher-cost patient characteristics as high average age, greater numbers of conditions, and greater numbers of deficits in activities of daily living. It was suggested to the Subcommittee that Medicare financing of GME be removed from the hospital, and that a 1.5- or 2.0-times weighting of its support be provided to geriatric training programs, in part because hospitals cannot get other payers to reimburse for additional residents in geriatrics even though Medicare will do so at the present time.[31]

Nonhospital based residency programs

Residency programs in preventive medicine, including public health, occupational medicine, and aerospace medicine, are not based in hospitals and must find their financing elsewhere. At the Council's public hearing, held on November 19 and 20, 1987, representatives from the American College of Preventive Medicine and the Association of Preventive Medicine Residents testified that the number of training positions is one-fourth the number of qualified applicants. The major reason given for this was the lack of stipends to pay residents. Because their programs are not hospital based, funding has to be obtained from a variety of sources such as foundations, industry, military, research grants, institutions housing the programs, and State and Federal sources. It was recommended that Federal and State support be provided for all preventive medicine training, and that the first priority be given to resident stipends.

Faculty-generated income for primary care programs

As noted above, 20 to 30 percent of income for family practice programs comes from faculty income generated by patient care services (the proportions for other specialties is not known). There appear to be at least two reasons for this: (1) Payment levels are generally lower for nonprocedural ("cognitive") services provided by specialties such as primary care than for procedural services; and (2) because training programs emphasizing ambulatory care may have less hospitalization, their teaching physicians do not receive the higher reimbursements of programs with more hospital usage.[32] Fee differentials between "cognitive" and "procedural" services, already found to be higher for nonprimary care services,[33] increased further during the 1970s.[32, 34]

A relevant consideration here is that the basic service of primary care physicians is the poorly defined "office visit." This service is consistently given a low valuation in relative value scales and fee schedules.[35-39] In addition, the additional time spent by physicians in patient education and counseling is not provided additional reimbursement, and usually must be absorbed in the "office visit" payment.

In sum, teaching programs that emphasize procedural services can rely on higher reimbursements, better third-party coverage for procedures, and higher program income.[36, 40-42]

The Physician Payment Review Commission (PPRC), seeking recommendations that would reduce Medicare expenditures under Part B and at the same time be consistent with its view on long-term physician reimbursement reform, recommended to the Congress that the annual increase allowed to Medicare physician charges through the Medicare Economic Index (MEI) be reduced, but that "primary care services" (defined as to service, such as "office visits," but without reference to physician specialty) be allowed the full increase. The PPRC stated that this would alter relative payments among physician services in a direction that it advocates for long-term reform. This Commission has been concerned that physicians are paid less for primary care services than for other services, limiting beneficiary access and underpaying for "office visit" costs.

In the 1987 OBRA (P.L. 100-203, signed by the President on December 22, 1987), the Congress enacted provisions consistent with the PPRC recommendations. Beginning April 1, 1988, for physicians taking assignment, the MEI will limit Medicare prevailing charge increases under Part B to 1 percent, except for primary care services, which are permitted a 3.6 percent increase. In 1989, further increases of 1 percent and 3 percent respectively are permitted. In addition, primary care services in all geographic areas are exempted from the limit placed on Medicare customary charges allowed to new physicians of 80 percent of the area (permitted) prevailing charge. (Primary care services are not defined by the specialty of the physician; they are office visits, home visits, visits to skilled nursing, intermediate, and long-term care facilities, and emergency department visits. The greater increases are not intended to apply to any separate billable services done in conjunction with such visits.)

For GME financing, a long-range shift toward upward weighting of the relative value of primary care services should result in a relative improvement in the portion of residency program financing that comes from payments for attending physician services, as well as make the primary care disciplines more attractive to students and residents. As noted above, one-third of family medicine program financing comes from payments for physician services. Although the proportion of program financing through teaching physician revenues is not known for other specialties, information available to the Council suggests that for many of them the amount of revenue generated by teaching physicians is considerably higher.

Incentives to hospitals

Three important trends—declines in overall inpatient utilization, shifts in the sites of care toward the ambulatory arena, and increased channeling of patients due to the growth of managed care and organized delivery systems—have affected income to hospitals, and are likely to have important effects on the future of GME. Concurrent with the decline in inpatient utilization, there has been a rapid increase in reported use of hospital outpatient departments and other ambulatory care sites both for diagnosis and therapy.[5]

At the same time, there are reduced incentives and income to hospitals that sponsor ambulatory training. From the hospital's point of view, to be cost competitive, especially with organized delivery systems, outpatient services must be highly productive.

Cost competitiveness is even more important in the ambulatory area than in inpatient care because of greater patient copayment requirements and more restrictive public reimbursement. Thus, education in ambulatory settings can present major problems in competitive environments since it is often more expensive, in part because there can be significant inefficiencies in the use of resources and less real teaching productivity in the more one-to-one education in ambulatory sites.[5]

Another factor that may affect teaching hospitals is HMO and PPO penetration, which has increased rapidly in many U.S. markets over the last several years.[43] This rise in HMOs may result in patients being channeled away from teaching hospitals to less costly ones. This channeling can be either through limitations on where patients can receive their care, or through incentives such as higher deductibles and coinsurance at hospitals that are not preferred by the plan.[5]

There are likely to be specialty considerations for hospital financing of GME programs in the changing environment. While little is published regarding this, the unpublished study presented to the Subcommittee (mentioned earlier) indicated that at one academic medical center, the department of family medicine provided hospitalizations and referrals amounting to about $2.8 million, or just three percent of the hospital's total revenues.[30] A similar concern with lower incentives to hospitals has been raised regarding training in geriatrics, based on possible undercompensation by Medicare for hospitalization of the frail elderly.[44]

Continuity Requirements in Title VII of the Public Health Service Act

Title VII provides for grants to residency training programs in the primary care specialties of family medicine, general internal medicine, and general pediatrics. One requirement of the grants is that the programs must utilize ambulatory care training settings that serve as primary sites for "continuity care"—the longitudinal and comprehensive health care provided by resident and other physicians who assume this responsibility for an ongoing patient population, as contrasted with care provided on an episodic basis and/or for specialized problems without physician continuity. In family medicine, the residency review committee (RRC) requires extensive ambulatory continuity experience that meets this requirement.

In order to receive Title VII residency training grants in general internal medicine and general pediatrics, a minimum of 25 percent of total training time must be spent in ambulatory "continuity" settings. Time spent in other rotations, including noncontinuity ambulatory rotations, cannot be counted in the 25 percent. This extent of continuity training is not a specific RRC requirement of general internal medicine and general pediatrics programs. Some dissatisfaction with the 25 percent requirement was expressed to the Subcommittee by representatives of general internal medicine and general pediatrics. They suggested that 25 percent is too much given other training needs. The Subcommittee did not come to any conclusions on this issue.

> *Recommendation 4.* **Medicare and private organizations should carry out demonstrations of alternative methods of payment for GME, such as differential payment methods as incentives to encourage and facilitate medical education in ambulatory and long-term care sites.**
>
> *Recommendation 5.* **Primary care, preventive medicine, and geriatric training should be encouraged, and it will be necessary for Federal and State support to these programs to be continued.**
>
> *Recommendation 6.* **The Council supports the conclusions of the Physician Payment Review Commission that cognitive skills be given greater relative weight than payment for procedures in reimbursement of physician services. By doing so, financing of primary care training should be improved, and more physicians may be attracted into primary care residencies.**

Ambulatory and outpatient GME training opportunities should be expanded to meet the needs for additional primary care physicians and ambulatory services. Many ambulatory facilities and free-standing units are not now being used for training. However, funding for GME is provided almost entirely through hospitals, largely from payments for inpatient services. It is very difficult for ambulatory facilities and entities other than those owned or operated by hospitals to secure financing for the additional costs of operating in the presence of a teaching program. Unless they operate their own hospitals, entities such as HMOs find it difficult to obtain financing for the added direct and indirect costs of medical education in ambulatory settings.

One approach considered by the Subcommittee was the development of a direct and indirect cost methodology for teaching in ambulatory facilities. The Subcommittee believes that this idea has merit, but recognizes the lack of a database for determining such costs in ambulatory teaching settings.

The Subcommittee received a number of recommendations that the financing of GME be less tied to inpatient hospital care. It concluded that, rather than routing all GME financing through hospitals, such financing should also be provided directly to an approved program whose sponsor is not a hospital. In considering this, the Subcommittee recognizes that teaching hospitals are an essential component of any residency program and that the preponderance of training in all specialties, although to a lesser extent in primary care, continues to be based in hospitals. Nevertheless, the Subcommittee believes that appropriate financing for ambulatory facilities is necessary to move medical education into settings that most appropriately prepare medical students and residents to meet current and future patient care needs. Demonstrations may be a desirable means of testing various ways to meet this goal.

The Subcommittee does not intend its recommendations in this area to increase the costs of GME through "add-on" payments. Rather, it recommends a redistribution of current GME payments to ambulatory settings not sponsored by hospitals in such a manner that total amounts are not increased.

> *Recommendation 7.* **In order to facilitate the expansion of ambulatory/outpatient GME training, and to encourage innovative program development and growth,**

all approved ambulatory/outpatient GME programs should be eligible for Medicare GME reimbursement in all settings (e.g., managed care programs, HMOs, PPOs, and free-standing ambulatory facilities), not just those paid for through hospitals. A methodology for reimbursement of direct and indirect costs should be developed.

C. MEDICARE FINANCING OF GRADUATE MEDICAL EDUCATION

In addition to examining overall GME financing issues, the Subcommittee focused specific attention on the treatment of direct cost and IME payments under Medicare. There are aspects of both direct and indirect payments that raise concern and suggest clarification, further study or monitoring, and action.

Direct Medical Education Payments

CONCLUSION C-1. THERE ARE UNEXPLAINED, SUBSTANTIAL VARIATIONS AMONG HOSPITALS IN PER-RESIDENT DIRECT COSTS.

Direct costs under the Medicare program include the following: (1) costs directly associated with GME teaching hospital activities, such as residents' salaries and fringe benefits, the supervisory costs of teaching physicians, and other educational costs to the hospital; and (2) other hospital costs including medical records, housekeeping, and general overhead that are allocated to the intern and resident cost center in hospital cost reporting. These costs do not include payments to attending (teaching) physicians under Part B of Medicare.

Table 2 displays estimated Medicare expenditures for direct medical education costs in Fiscal Years (FY) 1984 through 1989.

Table 2
Medicare Expenditures for Direct Medical Education *
Fiscal Years 1984-1989 (in millions)

Fiscal Year	GME **	Other	Total Direct Costs
1984	$ 371	$123	$ 494
1985	$ 641	$214	$ 855
1986	$ 870	$290	$1,160
1987	$ 964	$321	$1,285
1988	$ 975	$325	$1,300
1989	$1,030	$340	$1,370

* Reflects expenditures for direct medical education costs of hospitals phased into the Prospective Payment System (PPS). Excludes Maryland and New Jersey which have experimental hospital reimbursement waiver systems. Part-year costs in FY 1984 because initial hospital phase-ins took place throughout the year effective with the beginning of individual hospital cost-reporting years. (PPS implementation stages take place at the beginning of these individual years on or after specified dates, such as a Federal fiscal year, e.g., if a hospital cost-reporting year begins in July, a provision effective for a given Federal fiscal year [which begins October 1] does not become effective until July nine months later and is not completed until nine months into the next Federal fiscal year.) Excludes hospitals in New York and Massachusetts from FY 1984 and FY 1985 estimates due to reimbursement waivers which expired in FY 1985; partly includes them in FY 1986; and completely includes them in FY 1987 and following years. COBRA savings not included.

** Reflects approximately 75 percent of direct medical education costs supporting physician GME ("GME"), and 25 percent supporting nursing and allied health educational programs ("Other").

Source: Health Care Financing Administration, 1988.[3]

These are not total Medicare expenditures for GME direct costs during that period because they do not include payments to hospitals not under the prospective payment system (PPS) (see footnotes to Table 2). The apparent rapid growth in expenditures during the early years of this period was due in part to hospitals being phased into the PPS system.

There are two issues that should be considered regarding the resident salary and benefit component of direct costs: (1) the extent to which they are a cost of "education" versus a cost of medical services; and (2) the extent to which they add net costs to hospital and health care. Regarding education versus service, studies have shown that residency training is a joint product of education and service that cannot be uniformly or cleanly separated by cost accounting, time and motion studies, or self-reporting. Studies have suggested that perhaps three-quarters of residents' time represents service, and much of the remainder education. One study found that 65 to 70 percent of residents' time was spent in service and another 17 percent was devoted to both service and teaching; most of the remainder was used for education.[45]

Regarding whether costs are increased by residents and interns, the proportion of time spent in education may not be of consequence: as the Subcommittee heard from expert presentations,[46] evidence of the past 20 years suggests strongly that the services residents provide are worth at least as much as, and possibly more than, the amounts which they are paid. Other evidence suggesting a similar conclusion was provided to the Council's Subcommittee on Foreign Medical Graduates: the cost of replacing residents with other health professionals such as physician assistants appears to be higher in nearly every specialty than the current levels of payment for residents. This also suggests that payments for residents are fully returned in services, leaving open the question of whether the education component is reimbursed. It was suggested to the Subcommittee by a number of presenters that the reduced income of the resident represents his or her payment for the education.

Nevertheless, it can be contended that income foregone by residents does not represent costs foregone *in toto*, especially if resident services are billed by an attending physician, as may be done in the case of Medicare. Studies are contradictory and have not resolved this point. Another issue is whether teaching physician costs represent an added cost, given that they may also bill Part B under specified circumstances.[47] In this regard, it is important to note that the Administration has proposed that per-resident amounts consist only of resident salaries and fringe benefits as well as an appropriate overhead factor, and that costs for the supervision of residents should not be included in hospital reimbursement when such services are paid on a Part B reasonable charge basis.

It may be important to distinguish the amounts for intern and resident salaries from the larger amount identified by Medicare as direct costs. It is not clear whether total direct costs, as opposed to just intern and resident salaries and fringe benefits, represent an added net cost.

In 1986, Congress changed the method by which Medicare pays hospitals for the direct costs of GME, from "reasonable costs" to a hospital-specific per-resident amount to be updated on an annual basis. Reasonable costs were the net costs of the training program, including costs of the residents and interns, teaching physicians, program administration, and allocated overhead. Because the reasonable cost method is effectively retrospective cost reimbursement, hospitals had no incentive to control GME costs. Although this method was continued when the PPS was implemented for routine hospital costs in 1983, concern about GME costs led to the subsequent enactment of the per-resident method of payment.

The per-resident payment method, established under the Consolidated Omnibus Budget Reconciliation Act (COBRA), uses a formula for calculating Medicare's direct GME payments to hospitals, in which total payments to a hospital are a product of the hospital's specific per-resident amount times the weighted number of full-time-equivalent (FTE) residents in approved GME programs, times the proportion of total patient days attributed to Medicare patients. The per-resident amounts are based on the hospital's per-resident costs during the first year of the PPS, indexed annually by increases in the Consumer Price Index-Urban after an initial annual update of one percent (Figure 1). The FTE weighting factor is to be reduced by 0.5 for active residents who are more than one year past the number of residency training years required for initial board eligibility or for those with more than five years of residency training, with an exception of up to two years of training in geriatrics. The factors are applied only to the direct medical education payment, and IME payments are unaffected by these weighting factors.

The new payment system may nevertheless continue to have certain problems. Information from the Congressional Budget Office (CBO) presented to the Subcommittee, which was based on a small sample of hospitals in 1984, indicated a wide variation in per-resident costs that could not be fully explained. It has been suggested that these variations could be attributed to variations in teaching physician costs (i.e., whether faculty are on salary, bill separately, or volunteer), cost accounting variations, or area price and wage differences. In a sample of hospitals using 1984 data, annual hospital per-resident costs ranged from $7,500 to $187,500, with an average of $53,500 and a median of $49,700 (Figure 2). Of these, annual costs of resident salaries and fringes were thought to be about $30,000. Ten percent of the 1984 sample had well over $80,000 in per-resident costs, and five percent had over $100,000. Much of this variation among hospitals cannot be explained by the data available at the national level, e.g., university versus community teaching hospitals. There is uncertainty about possible inequities resulting from capped increases or other controls on the variation, since similarly situated hospitals and residency programs may receive different payment amounts for poorly understood reasons. Capping per-resident costs might not be appropriate if large direct cost payments to some hospitals were related to smaller payments for other costs.

The COBRA legislation required that a report be provided on the uniformity of approved FTE per-resident amounts. HCFA has undertaken this study (it was not completed at the time of

Figure 1
Computation of Medicare GME Payment to a Hospital

Direct GME Payment = (1984 Cost Per Resident) × (Price Index) † × Weighted Number of FTE Residents ‡ × Medicare Patient Days ÷ Total Patient Days

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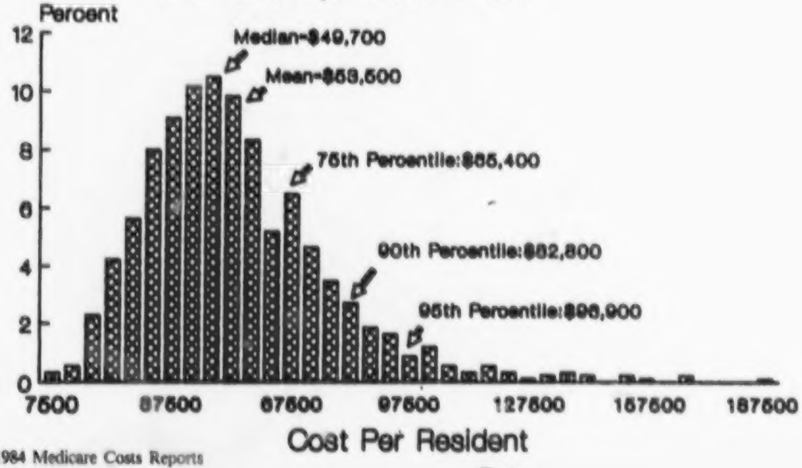
† The Index equals 1.0 in 1985 and thereafter is increased by the change in the Consumer Price Index for Urban Consumers.

‡ Weighted FTE Count of Residents = Number of FTE Residents − (0.5) × (# of FTE Residents 1 year past initial board or with more than 5 years of training) − (1.0) × (# of FTE FMGs who have not passed the exams required for ECFMG certification).

Figure 2
Distribution of Hospitals' Per Resident Costs



Source: C.B.O. tabulations of the 1984 Medicare Costs Reports this report), and also proposes intermediary reviews of hospitals' classifications of GME and operating costs. The Subcommittee believes that this is a problem that should be studied and addressed. It recommends the expeditious completion of the mandated study, and also the study of programs with per-resident costs well above and below the mean to determine the reasons for the varying costs.

> ***Recommendation 8.* The Secretary should study programs with per-resident costs well above the mean to define appropriate limits. Programs with lower per-resident costs should be studied to understand the reasons for the lower costs. The study should lead to limits to be placed on the excess of the direct per-resident costs of GME over resident stipends and fringe benefits costs.**

Indirect Medical Education (IME) Adjustment

> *CONCLUSION C-2. CURRENT PAYMENTS ASSOCIATED WITH THE GME INDIRECT COST ADJUSTMENTS ARE USED TO COMPENSATE FOR HIGHER COSTS PER CASE ASSOCIATED WITH TEACHING HOSPITALS USUALLY THOUGHT TO BE DUE TO GREATER SEVERITY OF ILLNESS WITHIN DRG CASEMIX, GREATER USE OF DIAGNOSTIC TESTS, ETC.*

The IME adjustment is an additional payment made to hospitals under the Medicare PPS, to compensate teaching hospitals for the higher operating costs of teaching hospitals associated with the training of interns and residents. The amount is the product of the hospital's IME adjustment percentage and DRG payments. The percentage is determined by a formula incorporating the hospital's number of interns and residents per bed (see below). As noted earlier, HCFA estimates an outlay of $2.02 billion in IME payments in 1988.

It is difficult to define these costs precisely; the payment is derived not from cost analysis, but from a coefficient of a cost function that is estimated by multiple regression analysis. Examples of such additional costs are the increased number of tests ordered by residents, the types of patients a teaching hospital may attract, the limited ability of DRGs to take severity of illness into account, the tendency for teaching physicians to carry out very extensive patient workups, the increased availability of state-of-the-art testing and treatment facilities, the increased application of more elaborate methods to treat very sick patients, the decreased productivity of hospital staff, and increased record-keeping requirements.[48] Other additional costs may be those of inner-city hospitals, such as for increased security. Finally, there is considerable unexplained variation that makes it difficult to apply uniform payment formulas to a wide variety of hospitals.

Table 3 displays estimated Medicare expenditures for the IME adjustment for FY 1984 through FY 1989. As these are only the amounts of IME payments under the PPS, they do not include similar kinds of higher payments allowed teaching hospitals under the reasonable cost reimbursement method. The apparent rapid increase was due in part to the staged phasing in of hospital payments under the PPS (see footnotes to Table 3). IME expenditures increased even when the rate was decreased in 1986, primarily because of the increased Federal share. After the transition to 100 percent Federal share is completed in FY 1988, IME expenditures will increase at a rate more in keeping with annual PPS increases (the PPS update factor).

Table 3
Medicare Expenditures * for Indirect Medical Education
Fiscal Years 1984-1989

Fiscal Year	Indirect Medical Education Factor **	Federal Share ***	Hospital-Specific Share	Expenditures * (in millions)
1984	11.59%	25%	75%	$ 285
1985	11.59	50	50	$ 740
1986	11.59	50	50	
	8.10†	55	45	$1,300
1987	8.10	75	25	$1,470
1988	8.10	100	—	$2,020
1989	7.70‡	100	—	$2,260

* Estimated expenditures for IME adjustment paid under the PPS to teaching hospitals. Paid only on the federally-determined (DRG-based) share of hospital payments, not on the share based on hospital-specific costs. Maryland and New Jersey excluded due to experimental hospital reimbursement waiver systems. Part-year costs in FY 1984 because initial hospital phase-ins took place throughout the year effective with the beginning of individual hospital cost-reporting years. Excludes hospitals in New York and Massachusetts from FY 1984 and FY 1985 estimates due to reimbursement waivers which expired in FY 1985, partly includes them in FY 1986, and completely includes them in FY 1987 and following years.

** Percentage utilized in a formula based on the number of 0.1th interns or residents per bed to yield a percentage of the Federal share added to it in reimbursing the hospital. The payment is for the additional operational costs of care associated with the presence of teaching programs (see text).

*** Percentage of the Federal (DRG-based) share in the hospital's combined reimbursement rate; the companion percentage is that of the hospital's specific allowable costs. Since the IME payment is made only on the Federal share, IME expenditures increased from FY 1984 through FY 1988 as this share increased from 25 percent to 100 percent over the period. IME expenditures increased when the IME factor decreased primarily because of this factor. Expenditures will increase at a rate more in keeping with the PPS update factor after the transition to 100 percent Federal share ends in FY 1988. The actual transition of these shares over time lags behind that indicated for the Federal fiscal years because of the lag between the beginning of Federal fiscal years and hospital cost-reporting years (see footnote to Table 2).

† The IME factor and Federal share both changed effective May 1, 1986.

‡ Current law; effective October 1, 1988.

Source: Health Care Financing Administration, 1988.[3]

The adjustment is a percentage rate calculated by a formula based on the number of interns and residents per bed (IRB) in a teaching hospital and incorporating the IME factor, currently approximately 8.1 percent per 0.1 IRB. The formula produces a curvilinear result: The percentage begins with the nominal factor for the first 0.1 IRB, but decreases with each additional 0.1 IRB. Effective for discharges on or after October 1, 1988, the IME adjustment factor is reduced to approximately 7.7 percent for each 0.1 IRB.

The Subcommittee appreciates the complexities involved in defining these costs. The amount of the adjustment is derived not from an analysis of actual costs, but rather from a formula based on estimates derived from regression analysis using Medicare cost report data. At the same time, other factors have been shown to contribute to higher hospital costs, including location in inner cities, number of beds, and size of the Metropolitan

Statistical Area (MSA) population. Some of these factors may cause higher costs in nonteaching hospitals as well. There continues to be debate about the appropriateness and success of capturing such factors through this adjustment.

Removing noneducational factors from the IME adjustment and providing for them elsewhere in the PPS could make it more complicated.[48] Congress has addressed this to some extent, by enacting larger increases in PPS payments to hospitals in large MSA and rural areas for both 1988 and 1989.

It should be noted that an alternate point of view was presented to the Subcommittee: Payment should be made for explicit and identifiable items such as resident services. This could provide a market test for academic health centers and teaching hospitals would move toward payments for professional services and away from the notion of costs of GME.[49] At the present time, the CBO and the Prospective Payment Advisory Commission (ProPAC) both devote resources to the study of indirect costs and the IME rate. Studies are being undertaken on ways to adjust the PPS system, including through the IME adjustment, to compensate teaching hospitals properly under Medicare. The Subcommittee recommends that the Council monitor this area in cooperation with the CBO and ProPAC.

> ***Recommendation 9.*** **The reasons for the higher costs of teaching hospitals should be analyzed further with the goal of paying for those costs, where justified, from appropriate sources. The Council believes that any changes should be cognizant of the overall effect on teaching hospitals.**

D. DIFFUSION OF RESPONSIBILITIES

In the course of its work, the Subcommittee addressed an important matter that has relevance to GME costs, but also has broader manpower relevance as well: the length and content of residency training and the decision-making process involved.

> *CONCLUSION D-1. THOSE WHO BEAR THE COST OF GME, INCLUDING PAYERS AND INSTITUTIONS, HAVE HAD LITTLE TO SAY ABOUT THE LENGTH OR CONTENT OF TRAINING PROGRAMS. LENGTH OR CONTENT REQUIREMENTS CAN BE ADDED WITHOUT THE INPUT OF INDIVIDUAL INSTITUTIONS OR PAYERS, EVEN THOUGH THIS RESULTS IN INCREASED COSTS PER RESIDENT GRADUATING FROM THE PROGRAM.*

Recent examples of changes in training requirements that have been put in place or are being considered are in the specialties of anesthesiology and cardiology, which have recently increased their residency requirements by one year each, and surgery, which is considering one additional year. It was suggested to the Subcommittee that some specialty or subspecialty boards are considering adding the requirement of a year of research.

The requirements for medical specialty certification are mandated by the 23 specialty certifying boards, and the duration and content of accredited GME programs are established under the auspices of the Accreditation Council for Graduate Medical Education (ACGME).[50] The ACGME sets the standards for residency training and voluntary accreditation of GME in the United States by establishing general requirements and approving specific requirements for specialty residency training programs proposed by its 24 RRCs. (Two specialties have separate RRCs but are under one certifying board.) The ACGME is made up of representatives appointed by its member organizations: the American Board of Medical Specialties (ABMS), the American Hospital Association (AHA), the AMA, the AAMC, and the Council of Medical Specialty Societies.

The Subcommittee believes that the process for establishing the length and content of GME training programs should be conducted as an integral part of educational decision making. At the same time, however, it understands the interest of various affected parties in having an opportunity to provide input into this process. This extends particularly to payers potentially affected by the costs resulting from new requirements, hospitals that would be required to find resources to pay the additional costs, and students and residents whose career decisions may be affected.

The Subcommittee understands that the present process does allow for the participation and input of hospital administrators, medical students, and others before final determinations are made. At the same time, testimony provided to the Council at its public hearing suggested that the participative nature of the overall process could be strengthened, particularly in the earlier stages. The process involves both the ABMS, as coordinator for its constituent specialty boards, and the ACGME. The Subcommittee believes that efforts should be pursued to meet the interests of all affected parties.

The member organizations of the ACGME review proposed changes in training requirements and thus have an opportunity to react to such changes prior to their approval by the ACGME. The certifying boards, however, often initiate proposals for change in residency training. More recently the boards have begun to provide opportunities through the ABMS for affected parties to provide input on changes being considered.

At the Council's public hearing, the Association of Academic Health Centers and AHA testified that input to decisions should be broadened, and that those who establish requirements for residency programs should take into greater account the consequences of increasing them.

> ***Recommendation 10.*** **Certifying and accrediting bodies should provide maximum early opportunity for input from institutions and payers in considering changes that will increase the length and content of training requirements in GME.**

E. STRUCTURE AND FUNCTION OF GRADUATE MEDICAL EDUCATION

Finally, the Subcommittee felt that the nature of GME financing, derived as it is largely from payments for patient care services, required an examination of the structure and goals of medical education. The purpose of this is, among other things, to permit a review of what is being reimbursed. It appeared to the Subcommittee that major changes in financing were inappropriate if there is uncertainty about the overall structure of medical education today.

> *CONCLUSION E-1. IT IS NOT CLEAR THAT THE CURRENT SYSTEM OF UNDERGRADUATE AND GRADUATE MEDICAL EDUCATION IS THE MOST EFFECTIVE OR THE MOST EFFICIENT METHOD OF PRODUCING APPROPRIATE NUMBERS AND SPECIALTIES OF PHYSICIANS. NEITHER IS IT CLEAR THAT THE OUTPUTS OF THE SYSTEM ARE OPTIMAL IN MEETING THE MEDICAL CARE NEEDS OF THE AMERICAN PEOPLE.*

The current structure and content of undergraduate medical education and GME is the result of studies and changes made by many institutions and disciplines. It is not clear that the system is the most effective or efficient method of producing appropriate numbers and specialty mix of physicians. In considering the means of financing GME, it is desirable to examine the question of what it is that should be financed.

> ***Recommendation 11.* The Council recommends a major broad-based study of the structure and content of undergraduate medical education and GME. The study should be conducted and financed primarily in the private sector.**
>
> **The review should be overseen by an organization or committee representing not only those involved in medical education, but also consumers and those both private and governmental who pay directly or indirectly for the costs of the education.**
>
> **The review should lead to recommendations for the structure and content of such education, recognizing the changing nature of medicine and the sites where services are provided, the rapidly increasing costs of education and medical care, and the needs for additional physicians by specialty and geographic distribution.**

The study is proposed for the following reasons: (1) the need for a greater emphasis on training in ambulatory sites to match the increased emphasis on ambulatory care in the practice of medicine; (2) the exploding knowledge base in medicine and the desirability of finding better ways of training physicians to use that knowledge base; (3) the changes that have taken place in the educational process prior to medical school; (4) the rapidly increasing costs of medical education; and (5) the steady tendency to lengthen residency programs.

A private rather than a governmental study is proposed for several reasons: (1) although the subject matter is closely related to the charge to the Council, it appears to be an extension of that charge and not encompassed within it; (2) the current funding of the Council falls considerably short of the funds that would be required to conduct the study; and (3) the Subcommittee believes that the recommendations of the study are more likely to be adopted if it is viewed as private rather than governmental.

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Report of the Subcommittee on Minority Representation in Medicine

INTRODUCTION

The Council on Graduate Medical Education, through its public hearing and the establishment of its Subcommittee on Minority Representation in Medicine (the Subcommittee), has provided a forum for discussing the participation of minority group members in medicine. The discussions revealed a continuing national concern and a clear consensus that, in spite of more than 20 years of efforts to improve minority representation, most minorities remain seriously underrepresented in the medical profession.

There is also concern that ongoing social, professional, and economic factors that may be affecting students' interest in medical careers will further increase minority underrepresentation. A well-publicized prediction that the Nation is heading for an oversupply of physicians discourages college graduates from attending medical school, as does the dramatic rise in tuition and related expenses.

Annual surveys have documented a continuing decline in high school students' interest in a career in medicine. This has been attributed to a variety of social, economic, and professional factors, such as the high costs of obtaining a medical education, and the perception that financial rewards and professional satisfaction have diminished for today's doctors.

Other negative influences include changing public perceptions of the medical profession, possible loss of status, the expectation of further infringements on physicians' professional and economic independence, changes in the health care system, the increasing susceptibility of the profession to legal liability, and the high cost of malpractice insurance. The AIDS epidemic may also be a contributing factor.

It appears that prospective medical students are reassessing the expected financial benefits and professional satisfaction of entering a medical career in relation to the opportunity cost of preparation for that career. This discouraging outlook probably has had a disproportionate effect on minority students.

The Federal Government, private organizations, and the medical education community have taken an active role in promoting a more equitable balance of members of racial and ethnic groups in the medical profession. They initiated a variety of public and private sector programs to improve minority students' access to and ability to pay for medical education. Despite these efforts, the underrepresented minority groups do not constitute a significantly greater proportion of medical school enrollees now than they did ten years ago. The Subcommittee, therefore, believes that it is important to continue to monitor this situation, to guard against regression from what has been achieved, and to expand efforts where possible.

CONCLUSIONS:

CONCLUSION A. MOST MINORITIES REMAIN UNDERREPRESENTED IN THE PHYSICIAN MANPOWER POOL IN THE UNITED STATES.

CONCLUSION B. PRIVATE AND FEDERAL EFFORTS ARE STILL NEEDED TO ENHANCE OPPORTUNITIES FOR UNDERREPRESENTED MINORITIES TO ENTER CAREERS IN MEDICINE, TO INCREASE MINORITY REPRESENTATION IN THE MEDICAL PROFESSION, AND TO ENSURE THAT MINORITIES HAVE EQUAL ACCESS TO HEALTH CARE SERVICES.

CONCLUSION C. THERE IS EVIDENCE THAT MINORITY PHYSICIANS PRACTICE PRIMARY CARE TO A GREATER DEGREE THAN THEIR NONMINORITY COUNTERPARTS, DISPROPORTIONATELY SERVE UNDERSERVED AND MINORITY PATIENTS, AND LOCATE IN FEDERALLY DESIGNATED HEALTH MANPOWER SHORTAGE AREAS.

CONCLUSION D. EVEN THOUGH MINORITY PHYSICIANS HAVE HELPED TO ALLEVIATE IMBALANCES IN HEALTH CARE AVAILABILITY TO MINORITY POPULATIONS AND UNDERSERVED COMMUNITIES, PROVIDING HEALTH CARE SERVICES TO THESE GROUPS WILL REMAIN NECESSARILY AND APPROPRIATELY THE RESPONSIBILITY OF BOTH MINORITY AND NONMINORITY PHYSICIANS.

Minority Populations and Active Physicians

Present trends and emerging demographics indicate that the minority component of the general population will expand to one of every four Americans by the year 2000, and to one of three by 2010. Between 1980 and 2000, the Black population will increase almost 35 percent to 35 million people, while the Hispanic population will increase 65 percent to 25 million. In the year 2000, while Black and Hispanic Americans will be almost 25 percent of the U.S. population, the number of Black and Hispanic physicians will have increased to only 4.1 and 3.4 percent, respectively, of all physicians in the United States.[1, 2]

The ratio of all active physicians to the general population is expected to increase from 214 per 100,000 in 1985 to 264 per 100,000 in the year 2000. However, the Black-physician-to-Black-population ratio, estimated at 54 per 100,000 in 1985, will increase only moderately to 80 per 100,000 by the year 2000. Among Hispanics, the ratio will actually decline from 104 per 100,000 in 1985 to 100 per 100,000 in the year 2000, because the rate of growth of the Hispanic population will be greater than the rate of increase in the number of Hispanic physicians.[1-3]

In 1980, with the exception of Asian Americans, the proportion of physicians who were members of minority groups fell significantly below the proportion of the total population that belonged to minority groups.[4] The proportion of Black U.S. physicians grew only one percentage point between 1968 and 1980. In 1968, they represented approximately two percent of all practicing physicians [5] while in 1980 they had increased only to three percent. Yet, Black Americans constituted approximately 12 percent of the general population in the U.S. in 1980. Hispanics and Native Americans were 6.4 and 0.6 percent, respectively, of the general population in 1980, but only about 3.4 and 0.1 percent, respectively, of the physician pool.[2, 4, 6]

The number of Black physicians doubled between 1975 and 1985, and the number of Hispanic and Native American doctors tripled. Part of the growth of minority physician pool is attributable to the immigration of Hispanic, Asian, and Black doctors to the United States. In spite of these increases, most minority groups continue to have low and disparate representation in the medical profession. Larger discrepancies are expected in the future because of differences between the growth rate of minority physicians and that of the minority population. For example, the aforementioned predicted gap between the number of U.S. citizen Hispanic physicians and the size of the Hispanic population is due in part to an expected decline in immigration of Hispanic physicians to the United States. These population growth characteristics and physician immigration trends are expected to exacerbate the current disparity in Hispanic representation in the physician manpower pool. Although there will be a marked increase in the absolute number of Black physicians because new graduates will exceed the number of inactive physicians, the Black-physician-to-Black-population ratio will not come much closer to the white-physician-to-white-population ratio than it is right now.

Minorities in Medical Schools

The participation of minority groups in medicine gained initial momentum as a result of the Civil Rights Act of 1964. This act generated both private and Federal sector efforts to increase the representation of minorities in the medical profession. In 1969, a task force composed of the Association of American Medical Colleges (AAMC), the American Hospital Association, the National Medical Association, and the American Medical Association recommended that medical schools establish a goal of 12 percent Black and other minority first-year enrollments for the 1976-1977 academic year,[3] based on the population parity principle.* This percentage was established based on the only minority group for which data were available, Black Americans. If population data had been available on other minorities underrepresented in the medical profession, the goal would have been about 16 percent. Private foundations and the Federal Government initiated programs to provide improved financial access to medical education for underrepresented minorities. Medical schools responded by developing and implementing affirmative admissions programs.

The 12 percent goal has never been reached. First-year enrollments in U.S. medical schools of those minorities underrepresented in the medical profession—Black Americans, Native Americans, Mexican Americans, and mainland Puerto Ricans—grew rapidly between 1969 and 1974, when first-year underrepresented minority enrollments in U.S. medical schools increased from 2.8 percent to a peak of 10.0 percent of all first-year students. Following the 1974-1975 academic year, this percentage declined to 8.7 percent in 1978-1979, and then underwent a gradual increase through the most recent academic year (Table 1). The number and proportion of underrepresented minority medical students reached an all-time high in the

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* The population parity principle defines equity of representation or parity for minorities and other groups in medicine as the same proportion as in the general population.

Table 1
Ethnic Distribution of First-Year and All Enrollees in U.S. Medical Schools, Selected Years

	1974-1975		1978-1979		1987-1988	
Ethnic Group	Number	Percent	Number	Percent	Number	Percent
Black American						
First-Year	1,106	7.5	1,061	6.4	1,221	7.3
All Enrollees	3,355	6.3	3,537	5.7	3,968	6.0
American Indian						
First-Year	71	0.5	47	0.3	68	0.4
All Enrollees	159	0.3	202	0.3	233	0.4
Mexican American						
First-Year	227	1.5	260	1.6	308	1.8
All Enrollees	638	1.2	882	1.4	1,144	1.7
Mainland Puerto Rican						
First-Year	69	0.5	75	0.5	116	0.7
All Enrollees	172	0.3	277	0.4	467	0.7
All Other Students						
First-Year	13,290	90.0	15,058	91.3	15,000	89.8
All Enrollees	49,230	91.9	57,315	92.1	59,923	91.2
Total						
First-Year	14,763	100.0	16,501	100.0	16,713	100.0
All Enrollees	53,554	100.0	62,213	100.0	65,735	100.0

Source: Association of American Medical Colleges, 1983, 1985, 1987, and 1988 [4, 8-10]

1987-1988 academic year when 1,713 (10.2 percent) first-year students were members of underrepresented minority groups.[7]

Minorities in Osteopathic Medical School

In osteopathic medical education, first-year underrepresented minority enrollments increased from 4.0 percent in 1976 to 6.6 percent in 1985 but decreased to 5.3 percent in 1986. It is interesting to note that the number of Black American first-year enrollees increased steadily from 1976 to 1983 but dropped back to 26 in 1986 (the same number as in 1976). Faculty members from all minority groups, including Asian Americans, composed almost six percent of all faculty in 1986-1987, an increase of one percentage point above the 1985-1986 representation, and four percentage points above earlier years.[11]

Minority Women in Medical School

Although most minority groups have not achieved population parity status in medical school enrollments, minority women generally have increased their representation at a faster rate than nonminority women and minority men. Underrepresented minority women have been a high proportion of such minority medical students. In 1987-1988, almost 50 percent of new entrant underrepresented minorities were women. In contrast, slightly more than one-third of all first-year nonminority students were female.[4]

Minority Medical School Faculty and Academic Medicine

The percentage of underrepresented minority faculty in U.S. medical schools has remained both low and stable for the past decade—for example, at 2.7 percent in 1978 and 2.8 percent in 1985. Many minority faculty members are employed by minority medical schools; in 1985, 225 of 950 Black faculty members, or 24 percent, were employed by Howard, Meharry, and Morehouse (Table 2). When Black faculty from historically Black medical colleges are excluded from the 1985 pool, Black Americans' representation drops from 1.8 percent to 1.4 percent of all faculty. Over 70 percent of Puerto Rican faculty members, 231 of 323, were employed by medical schools in Puerto Rico in 1985.[10]

The sociological literature and knowledgeable observers have directed attention to the strong relationship between role models and student aspirations and achievements.[13, 14] The possible consequences of the disproportionately low representation of minority faculty in U.S. medical schools include a static minority applicant pool, lower minority enrollments, and higher attrition and lower graduation rates among minority students. Minority role models can provide support that may alleviate some of these difficulties.

Minorities and Specialty Training

Medical educators also have noted that in order for minorities to achieve parity in the medical profession, minority physicians must be encouraged to train in specialty programs that will facilitate their entry into clinical research, academic medicine, and medical administration.[13] Physicians in certain specialties are more likely to assume leadership positions in academic medicine. Keith's study of medical school graduates demonstrated a significant correlation between specialty choice and subsequent entry into academic medicine. Graduates who had trained in internal medicine subspecialties entered academic careers at almost three times the rate of graduates trained in other specialties, and graduates trained in pediatrics also tended to enter academic careers at a significantly higher rate than those who had trained in other specialties. This study also found that few of the minority graduates had trained in those internal medicine subspecialties that most frequently lead to a career in academic medicine.[15]

Explanations for the low number of underrepresented minorities in the more competitive specialties and in academic medicine include:

- A disproportionately lower enrollment of minorities in medical schools which reduces the future pool of such students who would consider academic and research careers.
- Minority students' greater commitment to primary care.
- An inadequate number of minority role models in the highly competitive specialties, which may limit students' interest in such specialties.
- The higher levels of debt among minorities, which may affect their ability to pursue advanced GME.

Table 2
Ethnic Distribution of U.S. Medical School Faculty For Academic Years 1971, 1975, and 1985

	1971		1975		1985	
Ethnic Group	Number	Percent	Number	Percent	Number	Percent
White	27,005	77.9	33,345	82.0	43,564	83.0
Black	565	1.6	733	1.8	950	1.8
	(203)	(0.6)	(265)	(0.7)	(225)	(0.4)
American Indian	11	-	14	-	47	0.1
Mexican American	54	0.2	74	0.2	124	0.2
Puerto Rican	263	0.8	275	0.7	323	0.6
	(222)	(0.6)	(223)	(0.5)	(270)	(0.5)
Other *	2,432	7.0	3,622	8.9	4,571	8.7
Unknown	4,328	12.5	2,618	6.4	2,885	5.5
Total	34,658	100.0	40,682	100.0	52,464	100.0

– Less than 0.05 percent

( ) Brackets show either the number of Black faculty members at Meharry Medical College, Howard University College of Medicine, and Morehouse School of Medicine, or the number of Puerto Rican and other Hispanic faculty members on staff at medical schools in Puerto Rico.

* Includes Commonwealth Puerto Ricans, other Hispanics, and Asians.

Source: Association of American Medical Colleges, 1974, 1983 and 1987.[10, 12]

- Underrepresented students' inadequate contacts, networking skills, and knowledge of how to obtain a residency position in the highly competitive specialties. For example, AAMC data have shown that over half of the nonminority students who had obtained highly competitive positions had been enrolled in elective courses in those specialties in their last year of medical school. It appears that program directors were more familiar with, and more likely to choose, these students.

Minorities in Medical Leadership Positions

Although their numbers have grown, racial and ethnic groups continue to have less than parity representation among medical school deans and faculty, applicants, and students. They are also underrepresented as members and leaders of national, State, and local medical organizations.

Socioeconomic Background and Medical Careers

Opportunities for careers in medicine improved during the late 1960s and early 1970s for students from lower income families. However, the number of applicants reporting a family income of less than $15,000 has declined since 1978, suggesting that these students are not applying as much as in previous years. Many observers believe that minority students' higher college education debt loads, coupled with continual increases in medical school tuition and other educational costs, may adversely affect current levels of minority participation in medical schools. Unlike their nonminority counterparts, most underrepresented students are not able to depend on their own personal or parental resources for the financial support required to complete a college education and medical school. Other observers believe future medical students will be more affluent.[16, 17] This trend may already be underway: recent AAMC reports show that applicants whose families have high incomes have steadily increased; the trend applies to both underrepresented minorities and all other applicants.[4, 8, 10]

The high level of preentry indebtedness, coupled with the expectation of high medical school costs and further indebtedness, is probably a major deterrent to potential minority applicants. A loan package in an amount greater than the annual income of the student's family would be very undesirable to a low-income minority student already hesitant about borrowing. Indebtedness has more far-reaching implications for minority students. They often receive smaller or no family contributions while they are in student status, and are more likely to practice the less remunerative primary care specialties after completing their education.

Financial Assistance and Student Indebtedness

Medical students have traditionally used loans, scholarships, grants, gifts, and personal or family resources to finance their education. Students currently are meeting educational costs through more extensive and more expensive borrowing. Loans have accounted for 76 percent of all medical student assistance since the 1984-1985 academic year.

In contrast to the expanded availability and use of loans, the number and dollar amount of scholarships awarded to medical students declined by about 50 percent between the 1980-1981 and 1984-1985 academic years. In 1985-1986, medical students received almost $473 million in financial aid. Loans continued to be the major source of student financial assistance; 83,480 student loans were obligated for a total of over $359 million. The total amount of scholarship aid increased by five percent to over $111 million between academic years 1984-1985 and 1985-1986. Students received $2.4 million in additional financial assistance from the College Work-Study Program in 1985-1986.[18]

The increase in total dollar amount of loans obligated to students was principally attributable to continued growth in medical student reliance on the Health Education Assistance Loan (HEAL) and Auxiliary Loans to Assist Students or Parental Loans for Undergraduate Students (ALAS/PLUS) programs. However, HEAL eligibility traditionally has not been based on financial need. Moreover, because data on the racial/ethnic background of borrowers has never been compiled, the proportion of loans to underrepresented minorities cannot be determined. The only information from which an inference can be made is that students who have attended historically Black colleges have been significant recipients of HEAL program dollars.

As of April 1987, however, new HEAL recipients have had to demonstrate financial need. According to program officials, this requirement was instituted for the purpose of reducing the amount borrowed, not as an affirmative action initiative. Experts also raise the question of whether the HEAL could ever be considered an assistance program. Interest on these loans is compounded at market rates, and continues to accrue from the time of origination and during deferment periods granted for residency training. This process contributes to high levels of indebtedness and substantial repayment amounts. Recipients who enter repayment must maintain significant monthly payments just to keep pace with the accruing interest.

The Guaranteed Student Loan (GSL) remains the cornerstone of medical student financing. The statutory maximum has been substantially raised, resulting in increased use of this program and a concomitant decline in HEAL use. The two remaining Federal loan programs, the National Direct Student Loan and the Health Professions Student Loan (HPSL), are also approved if a student demonstrates financial need. These loans provide low-cost, subsidized assistance that is likely to be disproportionately used by underrepresented minority students.

Many observers are concerned that medicine will become an elitist profession again; the continuous underrepresentation of several minority groups, coupled with increasing medical education costs, may change the diversity of medical students by deterring candidates from lower income families. Increases in medical school tuition and other expenses, coupled with constraints on the availability of low-cost methods of financing their education, appear to have contributed to the need for students to borrow more often, in larger amounts, and at higher interest rates than in the past. The result is a significant rise in overall indebtedness.

Reports published by the AAMC and AMA have indicated that members of underrepresented minority groups enter medical school with higher debts from undergraduate school than other students and that a greater proportion of those underrepresented minority medical students were in debt. Table 3 summarizes AAMC survey data on medical student indebtedness and indicates that, while there were significant increases in debt for all students over the past five years, the proportion of underrepresented students who were in debt for $50,000 or more increased from less than 1.0 percent in 1978-1979 to over 28 percent in 1985-1986. The average obligation of indebted underrepresented minority seniors increased from $20,672 in 1981 to $40,100 in 1986. In 1987, the average debt of indebted seniors was $44,068 for Blacks, $41,457 for all underrepresented minorities, and $35,104 for all nonminorities; almost 36 percent of 1987 Black seniors were in debt for $50,000 or more, compared with 28.2 percent for all minorities and 19.5 percent for all other students.[18-20]

The Minority Pipeline—Minority Applicants

The stagnation and decline of the numbers of minority applicants and graduates, the implications of these trends for future access, and the availability of providers of health care services were some of the many concerns expressed during the Council's public hearing. The minority share of the applicant pool increased from 9.6 percent in 1981-1982 to 10.6 percent in 1987-1988. This increase in percentage has occurred not because of an increased number of underrepresented minority applicants, but because of the continuing substantial decline in nonminority, primarily white male, applicants. Although the absolute number of underrepresented minority applicants declined by 215 individuals between 1986 and 1987, their proportion increased from 10.1 percent to 10.6 percent of the applicant pool. The decline in the absolute number of underrepresented minority applicants has been about 600 from the peak year of 1984-1985 to the 1987-1988 academic year, i.e., from 3,578 to 2,988.[4]

Although the pool of nonminority applicants has declined steadily and underrepresented minorities increasingly have made up a larger share of the applicant pool in recent years, minorities as a group are less likely to be accepted to medical school (Table 4). The overall acceptance rates of underrepresented minorities continue to remain below the national average, primarily because acceptance rates are lower for Black applicants, who represent 73 percent of the underrepresented minority applicant pool, and specifically for Black men.[13]

AAMC data also show that the percentage of accepted applicants who actually enroll in medical school has been declining. In 1987, 6.8 percent of accepted minorities (105 persons) did not enroll, compared with 3.2 percent (47 persons) in 1983. In comparison, 6.4 and 4.3 percent, respectively, of all other 1987 and 1983 accepted students did not matriculate.[4]

Moreover, some observers believe that low-income and minority students may have academic difficulties after enrolling or will withdraw because of anxieties about their finances or valuable time taken away from their studies because of outside employment.[14, 21]

Table 3
Percent Minority and Nonminority Medical School Graduates by Level of Debt for 1979, 1983, and 1987

Range of Debt	1978-1979		1982-1983		1986-1987	
	Minority	Non-Minority	Minority	Non-Minority	Minority	Non-Minority *
None	7.5	27.4	9.0	14.0	7.7	17.9
$1-$14,999	43.5	35.3	29.2	18.9	10.3	14.7
$15,000-$29,999	37.8	31.2	36.7	42.5	24.7	26.1
$30,000-$49,999	10.4	5.7	20.4	20.0	29.1	24.6
$50,000 or more	0.9	0.3	4.5	4.7	28.2	16.8

* Nonminority column for 1986-1987 reflects data for all students.
Source: Association of American Medical Colleges, 1983, 1985, and 1988.[4, 8, 9]

Table 4
Number of Applicants and Percent Applicants Accepted to Medical Schools for Underrepresented and All Students
Academic Years 1978, 1982, and 1987

Students	1978		1982		1987	
	Number of Applicants	Percent Applicants Accepted	Number of Applicants	Percent Applicants Accepted	Number of Applicants	Percent Applicants Accepted
Black	2,564	38	2,600	38	2,203	49
American Indian	133	41	137	41	123	52
Mexican American	433	56	504	56	466	62
Mainland Puerto Rican	191	48	212	52	196	62
Total	3,321	41	3,453	42	2,988	52
All Students	36,636	45	35,730	48	28,123	61

Source: Association of American Medical Colleges, 1983 and 1988.[4, 8]

Historically Black Institutions

Historically Black institutions continue to play a significant role in educating minority physicians.* In 1967, 83 percent of all Black first-year students were enrolled at the two existing minority medical schools, Howard and Meharry. By 1974, the two schools enrolled 17.6 percent of the entering Black students. Following the opening of Morehouse College of Medicine in 1978, the proportion of first-year Black medical students at the three minority schools rose to 24.9 percent, almost one of every four Black entering students. By 1985 this percentage had drifted back to 17.5.[21]

Retention, Attrition, and Graduation

In the first year of medical school, underrepresented minority students have lower retention rates and higher repeat rates than nonminority students. In subsequent years, minority repeat rates decrease to an average of 6 percent, the average for all students. The apparent stability of retention rates for Black students is shown in data from 1974 through 1976 and 1981. Black students who entered medical school during these three years had retention rates of 93 to 95 percent after one year, 87 to 92 percent after two years, and 86 to 87 percent after three years, while the respective retention rates for those who entered medical school in 1981 were 93, 91, and 89 percent.[8, 12]

Rates of attrition for underrepresented medical students appear to be high when compared with other students and when measured by the usual standard because many minority students require more than four years to graduate from medical school. Several studies have found that, in comparison to nonminority students, underrepresented minority college and medical students are more likely to be older, married, and have more dependents.[14, 23] This suggests that because of their additional responsibilities, some minority students' progression in medical school may require extra effort and more time.

An important role in increasing enrollments and decreasing attrition among underrepresented minority students has been demonstrated at medical schools other than those which are historically Black. The recruitment and retention activities of the University of Illinois have proved that medical schools can increase minority enrollments and graduation through special efforts and programs. After the historically Black medical colleges, new entrant minority admissions have been highest at the University of Illinois Medical School since the 1984-1985 academic year.[24, 25]

Minority Participation in College and High School

Although the numbers of Black and Hispanic high school graduates have increased significantly, the percentage of high school graduates who enroll in college from each of these groups has declined since 1976. Furthermore, 45 to 50 percent of Black and Hispanic freshmen and sophomores drop out. Between 1975-1976 and 1985-1986, all minority groups experienced an increase in the number of degrees attained at every level of postsecondary education except for Blacks. Although Blacks experienced a 12 percent increase in the number of first professional degrees† conferred during this period, the number of bachelors, masters, and doctoral degrees earned in 1985 by Blacks was about 1,800 fewer than the number conferred in 1976.[26]

Minority Physicians and Access to Care

Greater participation of America's underrepresented minority groups in medicine—Black Americans, Native Americans, Mexican Americans, and mainland Puerto Ricans—is vitally important to increasing the availability of providers and of access to health care. During the public hearing, many of the medical education and specialty organizations noted that minority physicians' practice characteristics coincide with the Nation's health care delivery goals. Even as the American people experience an overall trend towards improved health care delivery and health status, the 1985 Report of The Department of Health and Human Services Secretary's Task Force on Black and Minority Health identified disparities between the health status of minorities and the nonminority population. Age- and sex-adjusted death rates for the Black population have shown 60,000 additional deaths annually that would not have occurred if the health status of Black Americans was identical to that of white Americans.

Although the Task Force report provided data appearing to show that age- and sex-adjusted death rates for Native Americans were comparable to those of whites, and lower for Asians/Pacific Islanders than for whites, death rates are probably underreported for both these minority groups, due to less frequent reporting of these races on death certificates as compared with the Census. The Task Force did not have access to data on age-adjusted death rates for Hispanics, and could therefore make no comments about the comparative health status of this group. It is probably safe to conclude that there are comparable disparities in the health status of other than Black minority groups. The Task Force report indicated that resources for minority health care may be less available than health services statistics suggest and stated that the availability of well-trained health care providers for minority groups may be crucial in reducing identified disparities in overall health status. In that regard, the Task Force report also stated "that many studies have found that health professionals who are from the same cultural background as their patients may be able to communicate better with their patients and thereby have a positive influence on some of the factors that affect their health outcome," and recommended increasing the number of Blacks and other minorities in the medical profession.[27]

Other studies have found that minority physicians practice primary care to a greater degree than nonminority physicians.[28-30] Keith and his colleagues' study of 1975 medical school graduates was the first followup of an entire cohort of minority and nonminority medical school graduates to include an analysis of race in identifying factors associated with physicians' specialty and location decisions. The study found that disproportionately higher numbers of Black and Mexican American physicians involved in direct patient care chose to practice the primary care specialties, to locate and practice medicine in federally designated HMSAs at twice the rate of their nonminority colleagues, and to provide health care for significantly greater proportions of ethnic minority patients and patients supported by Medicare. The study concluded that minority physicians have helped to alleviate imbalances in health care availability by increasing minority groups' access to health care, and by providing health care in medically underserved areas.[11]

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* Currently, the three historically Black medical colleges are: Meharry Medical College, Howard University College of Medicine, and the Morehouse School of Medicine.

† The first professional degree is the earliest degree that shows completion of the academic requirements to begin practice in a profession. The category includes allopathic and osteopathic medicine, dentistry, pharmacy, optometry, veterinarian medicine, podiatry, chiropractic, general law, the general theological professions, etc.

SUMMARY

Although the Council's primary concern is to improve the availability of, and assure access to, high-quality health care services for all the American people, it is also concerned that minority citizens have equal access to and the opportunity to complete a medical education. Because minority groups are extensively underrepresented in all areas of medicine, increased representation must continue to be a goal. This is particularly important in light of growing evidence that minority physicians are more likely to provide service to minority, underserved, and low-income populations.

> ***Recommendation 1.* Creative and expanded efforts need to be undertaken by government, private industry, and the educational community to increase the number of underrepresented minority applicants qualified to enter and complete a college and medical school education. This requires vigorous and aggressive efforts at both the high school and college levels.**
>
> ***Recommendation 2.* Successful minority recruitment programs should be examined to determine the reasons for their success for replication and implementation in other medical schools. Based on their previous and proven effort, medical schools should strengthen their recruitment programs by identifying undergraduate schools with sizable enrollments of qualified underrepresented minority students, and establish programs funded by public and private sources to support activities that will increase such students' interest in a career in medicine.**
>
> ***Recommendation 3.* Medical schools should have programs to increase recruitment and to reduce attrition among minority students. Those schools that presently do not have successful programs should direct their attention to and make use of information from those programs that have successfully reached these goals. High priority for public and private funding should be given to those programs that have achieved success and to programs demonstrating new and innovative approaches.**
>
> ***Recommendation 4.* Existing financial assistance programs should be strengthened by adopting a balanced strategy of scholarship, loan interest subsidy, and loan repayment programs to limit medical school debt, and to encourage schools to seek ways of reducing educational costs for students, particularly low-income and underrepresented minority students.**
>
> ***Recommendation 5.* In order to expand the number of underrepresented minorities in faculty positions at U.S. medical schools, Federal, State, and local governments should develop a program of financial support to accomplish this objective.**
>
> ***Recommendation 6.* Private foundations should be urged to support programs to enhance minority representation in academic medicine. Those foundations currently so involved should be applauded and encouraged to increase their efforts.**
>
> ***Recommendation 7.* In order to provide minority students with the opportunity for training in the full range of medical specialties, graduate medical education programs should be encouraged to develop and implement affirmative action policies to achieve that objective. In addition, such graduate medical education programs should be encouraged to provide appropriate faculty, clinical, and research role models for these medical students.**

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Appendices

A. Executive Summary from Volume I of the First Report of the Council

B. Summary of Public Hearing, November 19-20, 1987

C. Glossary of Key Terms

APPENDIX A

EXECUTIVE SUMMARY

The Council on Graduate Medical Education was created by the Congress to make recommendations regarding current and future adequacies of physician supply, both in the aggregate and by specialty; foreign medical graduates; and medical education programs and financing. By statute, the Council is to issue its first report by July 1, 1988 and issue further reports at least every 3 years thereafter until its termination on September 30, 1996.

This document represents Volume I of the Council's first report to the Secretary, Department of Health and Human Services, and the Congress. It presents the 10 principles underlying the work of the Council to date and a set of conclusions and over 40 recommendations addressing its charge.

This Executive Summary provides a list of these respective principles, conclusions, and recommendations. The remainder of this document elaborates on the process used by the Council since its first meeting in December 1986, and summarizes supporting rationale for its conclusions and recommendations. More detailed background information and supporting material is available in Volume II of this first report.

Principles adopted by the Council on Graduate Medical Education are:

1. The primary concern of the Council must be the health of the American people. There must be assured access for all to quality health care. Concern for the well-being of the health professions, medical schools, and teaching hospitals, while important, must be secondary to the above concerns.
2. The Council should consider the diverse needs of the various geographic areas and segments of the population, such as rural and inner-city areas, and minority and disadvantaged populations.
3. A goal of the Council is increased representation of minorities in the health professions. Targeted programs are appropriate and a necessary means of achieving this objective.
4. The Council must consider the interrelationship between services provided by physicians and those provided by other health professions.
5. The Council will favor the use of private sector solutions, recognizing that government or other interventions have been and may continue to be needed to address specific problems of distribution, quality, and access to health care.
6. The Council should be concerned about effects on total health care costs in the Nation. The Council must also take into account the financial and programmatic impact of its recommendations on the Federal budget in both the short and long term.
7. The Council recognizes that health care in the U.S. is not a "closed" system, and therefore its deliberations must be guided by an international perspective.
8. The Council must take into account changes in demographics (e.g., the aging population), disease patterns (e.g., increasing prevalence of the acquired immunodeficiency syndrome (AIDS)), patterns of health care delivery (e.g., increased emphasis on ambulatory care), and the unmet needs for prevention and care.
9. The Council believes that a strong system of medical education must be maintained in order to expand medical knowledge and provide access to quality medical care through an adequate supply of appropriately educated physicians.
10. American medical education should provide a basis for physicians of the future to be able to deliver continually improving patient care through a better understanding of disease processes and their clinical manifestations. The education system should prepare physicians to appropriately apply new techniques of diagnosis, treatment, and prevention in a compassionate and cost-effective manner.

Conclusions and Recommendations

A. PHYSICIAN SUPPLY IN THE AGGREGATE

CONCLUSION A-1. FROM THE DATA AND TESTIMONY IT HAS RECEIVED, THE COUNCIL HAS CONCLUDED THAT THERE IS NOW OR SOON WILL BE AN AGGREGATE OVERSUPPLY OF PHYSICIANS IN THE UNITED STATES. THE COUNCIL NOTES, HOWEVER, THAT THERE ARE SIGNIFICANT UNCERTAINTIES WHICH COULD CHANGE THIS ASSESSMENT. BECAUSE OF THE MANY FACTORS AFFECTING BOTH THE SUPPLY OF PHYSICIANS AND THE DEMAND FOR PHYSICIAN SERVICES, THE COUNCIL IS UNABLE EITHER TO MEASURE THE EXTENT OF THE OVERSUPPLY OR TO PREDICT HOW FAR INTO THE FUTURE IT WILL PERSIST.

CONCLUSION A-2. THERE IS CONFLICTING EVIDENCE AS TO WHETHER AN OVERSUPPLY OF PHYSICIANS WOULD NECESSARILY LEAD TO SOCIALLY UNDESIRABLE CONSEQUENCES.

Recommendation 1. **At the present time, the Federal Government should not attempt to influence physician manpower supply in the aggregate.**

Recommendation 2. **The number of first-year positions in GME should not be used to reduce the supply of licensed physicians in the aggregate; rather, if steps are taken to reduce physician supply, the reduction should take place in entering medical school class size.**

Recommendation 3. **The public and private sectors should focus their efforts on influencing clearly identified problems such as the geographic maldistribution of physicians, the continued underrepresentation of minorities in medicine, specialty shortages, and concerns regarding quality of care.**

B. GEOGRAPHIC DISTRIBUTION OF PHYSICIANS

CONCLUSION B-1. THERE IS A GEOGRAPHIC MALDISTRIBUTION OF PHYSICIANS, WITH TOO FEW PHYSICIANS IN MANY RURAL AND INNER-CITY AREAS.

CONCLUSION B-2. WHILE THERE CONTINUES TO BE AN INADEQUATE NUMBER OF PHYSICIANS IN MANY RURAL AND INNER-CITY AREAS, THIS PROBLEM IS NOT AS SEVERE AS IT HAS BEEN IN THE RECENT PAST AND MAY WELL BE AMELIORATED, AT LEAST IN PART, AS THE OVERALL SUPPLY OF PHYSICIANS INCREASES.

CONCLUSION B-3. MALDISTRIBUTION REMAINS A SERIOUS AND COMPLEX PROBLEM, REQUIRING SOLUTIONS MORE BROADLY BASED THAN THOSE FOCUSING EXCLUSIVELY ON MEDICAL EDUCATION.

Recommendation 4. **Existing activities that increase the likelihood that physicians will locate and remain in shortage areas should be continued and strengthened, such as:**

- **a. recruitment and selection of allopathic and osteopathic medical students who are likely to locate in shortage areas;**
- **b. medical school programs including preceptorships in shortage areas;**
- **c. student financial support, such as loan repayment in exchange for service;**
- **d. practice incentives (e.g., differential reimbursement, community support); and**
- **e. existing Federal and other programs such as the National Health Service Corps (NHSC), to meet the needs of the underserved communities.**

Recommendation 5. **More research and evaluation should be conducted on factors relating to the geographic distribution of physicians and their services to assure that a broad range of existing and new strategies is directed to this complex problem.**

C. MINORITY REPRESENTATION IN MEDICINE

CONCLUSION C-1. MINORITIES ARE STILL UNDERREPRESENTED IN THE PHYSICIAN MANPOWER POOL IN THE UNITED STATES.

CONCLUSION C-2. IT IS HIGHLY DESIRABLE TO INCREASE MINORITY REPRESENTATION IN THE MEDICAL PROFESSION FOR TWO REASONS:

- *TO ENSURE THAT MINORITIES HAVE EQUAL ACCESS TO A CAREER IN MEDICINE.*
- *TO ACHIEVE EQUITY IN HEALTH CARE SERVICES.*

Recommendation 6. **Creative and expanded efforts need to be undertaken by government, private industry, and the educational community to increase the number of underrepresented minority applicants qualified to enter and complete a medical education. This requires vigorous and aggressive efforts at both the high school and college levels.**

Recommendation 7. **Successful minority recruitment programs should be examined to determine the reasons for their success so as to replicate and implement them in other medical schools. Medical schools should strengthen their recruitment programs by identifying qualified underrepresented minority students and establishing programs funded by public and private sources to support activities that will increase such students' interest in a career in medicine.**

Recommendation 8. **Medical schools should have programs to reduce attrition as well as increase recruitment of minority students. Those schools which presently do not have successful programs should direct their attention to and make use of information from those programs which have successfully reached these goals. High priority for public and private funding should be given to those recruitment and retention programs which have achieved success and to programs demonstrating new and innovative approaches.**

Recommendation 9. Existing financial assistance programs should be strengthened by adopting a balanced strategy of scholarships, loan interest subsidies, and loan repayment programs to limit medical school debt and to encourage schools to seek ways of reducing educational costs to students, particularly low-income and underrepresented minority students.

Recommendation 10. To expand the number of underrepresented minorities in faculty positions at U.S. medical schools, Federal, State, and local governments should develop programs of financial support.

Private foundations should be urged to support programs enhancing minority representation in academic medicine. Those foundations currently so involved should be applauded and encouraged to increase their efforts.

Recommendation 11. To provide minority students with the opportunity for training in the full range of medical specialties, GME program personnel should be encouraged to develop and implement affirmative action policies. In addition, such GME program personnel should be encouraged to provide appropriate role models for these trainees.

D. PRIMARY CARE AND OTHER PHYSICIAN SPECIALTIES

CONCLUSION D-1. THERE IS EVIDENCE OF AN UNDERSUPPLY OF CERTAIN PRIMARY CARE PHYSICIANS TOGETHER WITH AN OVERSUPPLY OF SOME NONPRIMARY CARE SPECIALISTS.

CONCLUSION D-2. THERE IS AN UNDERSUPPLY OF PHYSICIANS IN FAMILY PRACTICE.

CONCLUSION D-3. THERE APPEARS TO BE AN IMPENDING UNDERSUPPLY OF PHYSICIANS IN GENERAL INTERNAL MEDICINE.

CONCLUSION D-4. AT PRESENT THERE IS AN ADEQUATE SUPPLY OF PHYSICIANS IN PEDIATRICS. GIVEN CURRENT HEALTH CARE POLICY REGARDING INSURANCE COVERAGE FOR CHILDREN, THERE WILL BE AN OVERSUPPLY OF PEDIATRICIANS IN THE YEARS AHEAD. IF, HOWEVER, HEALTH CARE COVERAGE IS EXTENDED TO THE SUBSTANTIAL NUMBERS OF CHILDREN WHO NOW LACK IT, THE FUTURE SUPPLY OF PEDIATRICIANS COULD RAPIDLY BECOME ONLY ADEQUATE OR EVEN INADEQUATE.

CONCLUSION D-5. ADDITIONAL EMPHASIS IS WARRANTED IN THE GENERAL AREAS OF GERIATRICS AND PREVENTIVE MEDICINE.

Recommendation 12. Allopathic and osteopathic medical school graduates should be strongly encouraged to enter training in primary care, particularly in family practice and general internal medicine. The general areas of geriatrics and preventive medicine should also be emphasized.

E. FINANCING GRADUATE MEDICAL EDUCATION

CONCLUSION E-1. SUPPORT FOR THE FINANCING OF GME IS ERODING AS PAYMENTS FOR PATIENT CARE ARE CONSTRICTED. SUBSTITUTE SOURCES ARE NOT DEVELOPING TO TAKE THE PLACE OF PATIENT CARE REIMBURSEMENTS.

Recommendation 13. Funds to finance GME should continue to come from present sources. The Council recommends against making any major and/or precipitous changes in the way in which GME is financed. If changes are made in the way that GME is financed, they should take place gradually.

Recommendation 14. Except as modified by later recommendations, Medicare payments for direct costs of GME should continue to utilize existing sources, conduits, and recipients.

Recommendation 15. Until further data and analysis are available on the potential effect of reduced Medicare GME payments on teaching hospitals and training programs, the Council recommends that (1) the aggregate level of payments for GME be maintained at current levels and (2) payments for direct GME costs continue to include all expense categories currently allowed.

During 1988-89, the Council will assign high priority to a comprehensive review and analysis of Medicare GME payments and may make additional recommendations in an interim report.

Recommendation 16. The Council places the highest priority on reimbursement of residency training stipends and fringe benefit costs, training in those primary care specialties which are in short supply, training in preventive medicine and geriatrics, support of quality GME programs in underserved communities, and support for the training of minorities. If reductions are made in the reimbursements for the direct costs of GME, these areas should be sheltered from the impact.

CONCLUSION E-2. GME IN AMBULATORY SETTINGS IS INCREASINGLY NECESSARY IN MANY SPECIALTIES FOR OPTIMAL TRAINING AND PREPARATION FOR PRACTICE.

Recommendation 17. **The Council believes that a concerted emphasis on training in ambulatory settings is warranted.**

CONCLUSION E-3. THERE ARE DIFFICULTIES IN FINANCING GME IN AMBULATORY SETTINGS, RELATED TO LOWER LEVELS OF PAYMENT BY THIRD PARTIES AND TO INCREASED LOGISTICAL PROBLEMS IN TEACHING. THE CURRENT FINANCING OF GME RESULTS IN DISINCENTIVES FOR AMBULATORY TRAINING.

Recommendation 18. **To facilitate the expansion of ambulatory/outpatient GME, and to encourage innovative program development and growth, all approved GME programs, including those based in ambulatory/outpatient settings, should be eligible for Medicare GME reimbursement. A methodology for reimbursement of direct and indirect costs for ambulatory training should be developed.**

Recommendation 19. **Medicare and private organizations should carry out demonstrations of alternative methods of payment for GME in ambulatory and other nontraditional settings. It may be necessary to consider differential payment incentives to encourage and facilitate medical education in ambulatory and long-term-care sites.**

CONCLUSION E-4. THE FINANCING OF GME IS PARTICULARLY PROBLEMATIC FOR THE AREAS OF PRIMARY CARE, GERIATRICS, AND PREVENTIVE MEDICINE.

CONCLUSION E-5. THE PRESENT SYSTEM OF HEALTH CARE FINANCING DECREASES THE ATTRACTIVENESS OF CERTAIN DISCIPLINES TO STUDENTS, AND PRESENTS INCENTIVES WHICH TEND TO PRODUCE A CONCENTRATION OF PHYSICIANS IN WHAT MAY BE OVERSUPPLIED SPECIALTIES. THESE INCENTIVES ARE THE RESULT OF (1) DIFFERENTIALS BY SPECIALTY IN REIMBURSEMENTS TO PHYSICIANS FOR SERVICES APART FROM MEDICAL EDUCATION PAYMENTS AND (2) DIFFERENTIALS BY SPECIALTY IN BENEFITS TO HOSPITALS FROM INPATIENT HOSPITALIZATION AND THE USE OF OTHER HOSPITAL SERVICES.

Recommendation 20. **Primary care, preventive medicine, and geriatric training programs should be encouraged.**

- **a. It is necessary to continue and expand Federal, State, and private sector support for these programs.**
- **b. Existing Title VII primary care grants and other support for primary care programs should be expanded.**

Recommendation 21. **The Council supports the recommendation of the Physician Payment Review Commission that primary care physician services be granted greater Medicare fee increases than other physician services, as a change in direction of relative payments to physicians that the Commission advocates for long-range reform.**

F. MEDICARE FINANCING OF DIRECT AND INDIRECT COSTS OF GRADUATE MEDICAL EDUCATION

CONCLUSION F-1. THERE REMAIN UNEXPLAINED, SUBSTANTIAL VARIATIONS AMONG HOSPITALS IN PER-RESIDENT DIRECT COSTS.

Recommendation 22. **The COBRA-mandated study of the variation in per-resident direct costs should be carried out expeditiously. Programs with per-resident costs well above the mean should be studied to define appropriate limits, and programs with lower per-resident costs should be studied to understand the reasons for the lower costs.**

CONCLUSION F-2. THE GME INDIRECT COST ADJUSTMENT IS USED TO COMPENSATE TEACHING HOSPITALS FOR HIGHER COSTS PER CASE THOUGHT TO BE DUE IN PART TO FACTORS SUCH AS GREATER SEVERITY OF ILLNESS WITHIN DIAGNOSIS-RELATED GROUPS (DRGs), GREATER USE OF DIAGNOSTIC TESTS, ETC. SOME OF THESE COSTS MAY NOT BE DIRECTLY RELATED TO MEDICAL EDUCATION.

Recommendation 23. The reasons for the higher costs of teaching hospitals should be analyzed further with the goal of paying for medical education costs through the indirect teaching adjustment where justified and paying for costs not related to teaching programs through other mechanisms where that is more appropriate. The Council believes that any changes should take into account the overall effect on teaching hospitals.

G. FOREIGN MEDICAL GRADUATES AND ACCESS TO GRADUATE MEDICAL EDUCATION

CONCLUSION G-1. THE PRINCIPLE OF INDIVIDUAL COMPETENCY AS THE DOMINANT CRITERION FOR SELECTION INTO GME SHOULD BE MAINTAINED.

CONCLUSION G-2. DIFFERENTIATION AMONG FMGs ON THE BASIS OF CITIZENSHIP OR IMMIGRATION STATUS IS CONTRARY TO THIS PRINCIPLE, AS WELL AS TO U.S. TRADITION, AND ETHICAL CODE, AND IS PERHAPS ILLEGAL.

CONCLUSION G-3. IT IS HIGHLY DESIRABLE THAT ALL GRADUATES OF U.S. ALLOPATHIC AND OSTEOPATHIC MEDICAL SCHOOLS BE ABLE TO OBTAIN AN ENTERING POSITION IN GME. HOWEVER, U.S. MEDICAL SCHOOL GRADUATES SHOULD NOT BE GRANTED AUTOMATIC PRIORITY OVER THE QUALIFIED GRADUATES OF NONDOMESTIC MEDICAL SCHOOLS AS A MEANS OF ACHIEVING THIS GOAL.

CONCLUSION G-4. U.S. MEDICAL SCHOOLS ARE OBLIGATED TO PROVIDE THE BEST POSSIBLE EDUCATION WHICH WILL ALLOW ALL GRADUATES TO COMPETE EFFECTIVELY FOR GME POSITIONS. THEY SHOULD CAREFULLY EVALUATE ALL STUDENTS AND GRADUATE ONLY THOSE CONSIDERED UNEQUIVOCALLY QUALIFIED FOR GME.

Recommendation 24. Selection into GME programs should be based on the relative qualifications of the individual applicants, not on group or institutional associations.

Recommendation 25. For the purpose of limiting access to GME, the Federal Government should not establish policies which would discriminate against medical school graduates on the basis of citizenship, immigration status, or medical school location.

CONCLUSION G-5. THE CURRENT SYSTEM FOR TESTING FMGs ON KNOWLEDGE IN THE BASIC MEDICAL AND CLINICAL SCIENCES IS ADEQUATE. WITH THE EXPECTED ADDITION OF A TEST TO ASSESS APPLIED CLINICAL SKILLS AND A TEST OF SPOKEN ENGLISH, CURRENT CONCERNS REGARDING THE EVALUATION OF FMG CANDIDATES FOR ENTRY INTO GME WILL HAVE BEEN ADDRESSED.

CONCLUSION G-6. IT WOULD BE BOTH PRESUMPTUOUS AND UNWISE FOR THE GOVERNMENT AND/OR THE PRIVATE SECTOR TO ATTEMPT TO ESTABLISH PROCEDURES FOR ACCREDITING MEDICAL SCHOOLS OUTSIDE ITS TERRITORY.

Recommendation 26. A single medical knowledge examination for all GME candidates should be implemented as soon as possible.

Recommendation 27. If an applied clinical skills assessment examination is introduced for general applicability for entry into GME, one examination should be used in evaluating all candidates including graduates of U.S. medical schools.

Recommendation 28. The private sector should be sensitive to bias in testing which may be caused by use of new testing technologies and methodologies.

Recommendation 29. Neither the Government nor the private sector should establish a system for accreditation of foreign medical schools.

Recommendation 30. The private sector should endorse and assist the efforts of foreign countries to establish national or regional standards and procedures which will improve education in their medical schools.

CONCLUSION G-7. UNLESS ALTERNATIVE SYSTEMS FOR PROVIDING CARE ARE ESTABLISHED FIRST, EXCLUSION OF FMGs FROM GME PROGRAMS WILL REDUCE THE ABILITY OF A

SMALL NUMBER OF HOSPITALS TO PROVIDE CERTAIN ESSENTIAL HOSPITAL-BASED MEDICAL SERVICES. THESE HOSPITALS SERVE A DISPROPORTIONATE SHARE OF THE POOR. AMBULATORY SERVICES WILL BE MOST IMMEDIATELY AND SEVERELY IMPACTED.

CONCLUSION G-8. NONPHYSICIAN HEALTH CARE PROVIDERS CAN PERFORM SOME OF THE TASKS NOW PROVIDED BY FMG RESIDENTS. HOWEVER, THE DEGREE TO WHICH THIS CAN BE ACCOMPLISHED VARIES MARKEDLY DEPENDING ON THE NATURE OF THE SPECIALTY AND THE LEVEL OF CARE BEING PROVIDED.

Recommendation 31. **If the Federal Government and/or the private sector were to develop policies which would reduce the number of FMGs in GME, alternative systems for delivering hospital-based medical care should be established in advance for those FMG-dependent hospitals which serve a disproportionate share of the poor.**

Recommendation 32. **If policies are adopted which would reduce the number of FMGs in GME, consideration should be given to the following to minimize major disruption to provision of health services:**

- **a. A transition period should be allowed to enable hospitals to make necessary adjustments in GME programs. Temporary waivers from such reductions should be provided for programs which offer high-quality education and provide primary care in an underserved area or are serving a large indigent population, because these programs may require more time to increase the complement of alternative full-time health care providers.**
- **b. Federal and State Governments and the private sector should provide financial incentives (e.g., educational loan repayment, bonus for tenure, partial payment of malpractice insurance) to assist hospitals in replacing FMG residents with full-time physicians, residents who are graduates of U.S. medical schools, or other appropriate health care providers.**

H. FOREIGN MEDICAL GRADUATES AND INTERNATIONAL RELATIONS

CONCLUSION H-1. IT IS LIKELY THAT GME PROGRAMS WHICH HAVE TRADITIONALLY PROVIDED TRAINING FOR EXCHANGE VISITOR PHYSICIANS WHO RETURN TO THEIR HOME COUNTRIES WILL HAVE TO REDUCE THEIR EFFORTS IF FOREIGN PHYSICIANS ARE EXCLUDED FROM STIPEND/SALARY REIMBURSEMENTS.

CONCLUSION H-2. SOME COUNTRIES SEEKING U.S. ASSISTANCE FOR DEVELOPMENT OF THEIR PHYSICIAN MANPOWER ARE FINANCIALLY ABLE TO SUPPORT THESE EFFORTS; OTHERS, WITH FEWER RESOURCES, ARE NOT. PARTICIPATION IN THE EXCHANGE VISITOR PROGRAM OF THE UNITED STATES BY PHYSICIANS FROM THIS LATTER GROUP OF COUNTRIES HAS BEEN STEADILY DECREASING IN THE LAST DECADE.

CONCLUSION H-3. THERE IS A NEED TO EXPAND AND MODIFY THE EDUCATIONAL OPPORTUNITIES FOR EXCHANGE VISITOR PHYSICIANS TO BETTER MEET THE HEALTH CARE DELIVERY REQUIREMENTS OF THE HOME COUNTRY AND TO ENHANCE RELATIONS WITH DEVELOPING COUNTRIES.

Recommendation 33. **Exchange visitors in traditional GME should continue to be supported like all other participants in GME. Patient care funds should continue to support the proportion of activities that actually provide patient care. Home country support, the trainee's own funds, foreign aid funds, or other sources of support should be used for nontraditional educational experiences of the exchange visitor.**

Recommendation 34. **To encourage reestablishment in the home country, the two-year return home requirement should be modified to increase the number of years to five. This would contribute to a longer period of time for reacculturation before reentry into the United States is possible.**

Recommendation 35. **The public and private sectors should support the efforts underway to implement the International Medical Scholars Program. This support should be both monetary and programmatic.**

Recommendation 36. **Training in traditional GME may not be appropriate for many exchange visitors.**

Although a number of alternative programs exist at the present time, additional programs should be developed. All appropriate bodies, both in the public and private sectors, should assist with the development of programs which would be broader than or different from classic clinical training. Although more expensive (but probably more effective), training assistance should be conducted in settings which involve both the home country and the United States. Funding resources for this effort should be sought from the U.S./home country governments, international corporations, and private foundations.

I. STRUCTURE AND CONTENT OF MEDICAL EDUCATION

CONCLUSION I-1. THOSE WHO BEAR THE COST OF GME, INCLUDING PAYERS AND INSTITUTIONS, HAVE HAD LITTLE TO SAY ABOUT THE LENGTH OR CONTENT OF TRAINING PROGRAMS. LENGTH OR CONTENT REQUIREMENTS CAN BE ADDED WITHOUT ADEQUATE INPUT OF INDIVIDUAL INSTITUTIONS OR PAYERS, EVEN THOUGH THIS RESULTS IN INCREASED TRAINING COSTS.

***Recommendation 37.* Certifying boards and accrediting bodies should provide maximum early opportunity for input from institutions and payers in considering changes in the length or content of GME training programs. Certifying boards and accrediting bodies should be required to justify changes that would increase the length of training or would add a research component to a clinical training program. The Council urges the parents of the Accreditation Council for Graduate Medical Education (ACGME) to convene for the purpose of determining methods by which this recommendation can be implemented. It also urges the American Board of Medical Specialties (ABMS) to bring this to the attention of its individual boards.**

***Recommendation 38.* In view of educational and other concerns that relate directly to their professional future, medical students and residents should also be given the same opportunity for early input to certifying boards and accrediting bodies.**

CONCLUSION I-2. IN SOME GME PROGRAMS THE QUALITY OF THE EDUCATION HAS BEEN ADVERSELY AFFECTED BY EXCESSIVE SERVICE REQUIREMENTS.

***Recommendation 39.* Residency approval bodies should carefully scrutinize those GME programs which have large service loads.**

***Recommendation 40.* The Federal Government and the private philanthropic sector should provide resources to study and develop alternative teaching/service models in service-intensive settings. Successful models should be shared with the medical community and institutionalization of these models encouraged.**

CONCLUSION I-3. THE COUNCIL SHARES THE CURRENT CONCERNS ABOUT EXCESSIVE RESIDENT DUTY HOURS AND INADEQUATE SUPERVISION AND THEIR IMPACT ON THE QUALITY OF PATIENT CARE AND RESIDENT EDUCATION.

***Recommendation 41.* The Council is supportive of efforts to resolve the problems of resident physician fatigue and inadequate supervision, but it cautions against global solutions which may be insensitive to local variation in patient care loads and service requirements.**

J. DATA AND RESEARCH ISSUES

CONCLUSION J-1. PHYSICIAN MANPOWER ANALYSIS, DEVELOPMENT OF HEALTH POLICY, AND PLANNING CONTINUE TO BE HAMPERED BY CONSIDERABLE LIMITATIONS IN DATA AND RESEARCH.

***Recommendation 42.* Adequate public and private sector funding should be provided to support the demonstration models, studies, and data-related activities recommended in this report.**

***Recommendation 43.* The Council recommends that annual authorization and appropriation levels of $1.5 million be provided to it to assure that adequate resources are available to support its analytic agenda and cover its staff and meeting expenses.**

***Recommendation 44.* Wherever possible and appropriate, encouragement should be given to collaborative public and private sector data collection and research efforts in the area of physician manpower.** □

APPENDIX B

SUMMARY OF PUBLIC HEARING

Council on Graduate Medical Education
Summary of Public Hearing
November 19-20, 1987

Introduction

The legislation authorizing the establishment of the Council on Graduate Medical Education (COGME) provided the Council with specific authority to hold hearings .... " In order to carry out the provisions of this section, the Council is authorized to ... collect such information, hold such hearings, and sit and act at such times and places, either as a whole or by subcommittee, and request the attendance and testimony of such witnesses and the production of such books, records, correspondence, memoranda, papers, and documents as the Council or such subcommittee may consider available. (underlining added) " Consistent with this legislative provision, and in keeping with the consultative approach adopted by the Council, a public hearing was held by COGME in Bethesda, Maryland on November 19 and 20, 1987. The following discussion summarizes the testimony provided at the Hearing, and provides some additional background information regarding the approach and process used by the Council.

At the outset of the hearing, Neal A. Vanselow, M.D., Chairperson of COGME, announced that Mr. Pat Groner had submitted his resignation from COGME because of irreconcilable scheduling conflicts this coming year. Dr. Vanselow announced that replacing Mr. Groner on the Council, as well as on the Foreign Medical Graduate (FMG) Subcommittee, would be Mr. Stuart Marylander, President of Cedar Sinai Medical Center in Los Angeles, California. Mr. Marylander joined the Hearing as it was in process on November 19.

All members of COGME, with the exception of Mr. Sheldon Samuels, were present at the Hearing. Donald Weaver, M.D., Director, Division of Medicine, Bureau of Health Professions, Health Resources and Services Administration, sat in for David N. Sundwall, M.D., the Public Health Service alternate.

Throughout the Hearing, witnesses were introduced by Dr. Vanselow or by David Satcher, M.D., Ph.D., Council Vice Chairperson.

Background

An important feature of the Council's work in developing its first report was the consultative process adopted by the Council to assure a wide range of input to its deliberations. This process was highlighted by a number of important activities. First, each plenary session of the

Council included a formal public comment period to allow individuals and organizations to present their views to the full committee. Second, virtually all meetings of the COGME Subcommittees included extensive testimony provided by experts in subject matter areas and presentations by interested organizations. Third, the Council Chairperson on behalf of the Council periodically engaged in direct consultations with key officials in the Department of Health and Human Services and key staff in the Congress regarding the work of COGME. And fourth, and in many ways the principal consultative effort by COGME, the Council convened a formal public hearing in November 1987.

To assure the widest notice of the Public Hearing, the Council published a formal notice in the September 18, 1987 issue of the *Federal Register* announcing this special session. Furthermore, separate copies of the notice were sent in a special mailing to over 500 organizations. Included in the mailing were organizations representing a broad range of perspectives - consumers, medical sector, foundations, business and labor, insurance and hospital sectors, academia, State and local government, students, health services research organizations, U.S. and alien foreign medical graduates, women and minority health professions groups, media, etc.

The September notice indicated that the Council, through its Subcommittees, had "developed a list of issues to guide its deliberations both for the short term as well as for subsequent reports." As indicated in the announcement, these issues had been collectively reviewed and approved by COGME at its plenary session on June 30, 1987. The announcement included the total list of issues in the areas of physician manpower, foreign medical graduates, and graduate medical education programs and financing, along with an indication of those issues that the Subcommittees viewed as priority matters for the Council's first report.

Subsequent to the publication of the announcement, the Council did meet in plenary session on October 6. At that session, the Council adopted a set of 10 principles to guide its further deliberations, and also reviewed Subcommittee reports which provided preliminary conclusions and recommendations developed by these groups. In addition to the list of issues published in the formal announcement, all organizations and individuals that testified at the Public Hearing also received in advance a copy of the 10 principles and the Subcommittee reports reviewed by the Council in early October.

Hearing Participants

A total of 42 individuals representing nearly 50 organizations participated in the Public Hearing on November 19 and 20, giving oral presentations. Each witness was provided 10 minutes for an oral presentation before the Council, which sat in plenary session. A 5-minute segment was provided for discussion between Council members and each presenter. Furthermore, the Council received written testimony from an additional 15 individuals and organizations who were not present at the Hearing itself. A complete list of the witnesses and organizations is included in Exhibit I at the end of this summary. The list indicates the order in which participants actually appeared before the Council over the 2-day period. The remainder of this summary, in contrast, reports on the Hearing by content area.

Hearing Synopsis

A. Throughout the testimony received by the Council, there were a number of matters where presenters were in general agreement. Highlights included the following:

1. COGME PRINCIPLES. In general, testimony regarding the 10 principles adopted by COGME at its October meeting was uniformly favorable. Although several organizations commented on additional principles concerning the financing of graduate medical education, their "principles" more closely approximated the "conclusions and recommendations" under consideration by COGME. As a consequence, such testimony was not viewed by the Council as a statement regarding its 10 principles.

   Some attention was directed to the first principle adopted by the Council: "The primary concern of the Council must be the health of the American people. There must be assured access for all to quality health care. Concern for the well-being of the health professions, medical schools, and teaching hospitals, while important must be secondary to the above concerns." Both the American Medical Student Association (AMSA) and the Association of American Medical Colleges (AAMC) commented that these two objects of concern -- health of the American people and the well being of the health professions, medical schools, and teaching hospitals -- were related causally. Viewing the first object as an end and the second object a means, both organizations commented on the important dependent relationship between the two.

   The AAMC also commented on the ninth principle: "The quality of medical care as well as the adequacy of the supply of physicians are products of the medical education system. Hence, assurance of access to good care requires the assurance of sufficient numbers of appropriately educated physicians." Commenting that this principle only addressed sufficient numbers of appropriately educated physicians, the AAMC suggested that the principle as stated did not place the relationship between education and health status in proper perspective.

   A suggestion was made by the American Academy of Orthopaedic Surgeons (AAOS) that the Council keep the principles visible and "to use them as a litmus test for recommendations as they emerge from your subcommittees and as you frame your reports to the Congress."

2. MEETING THE HEALTH CARE NEEDS OF THE UNDERSERVED. Throughout the testimony, organizations often called attention to the health care access and availability needs of underserved population groups. References to this issue in draft COGME materials were reinforced by testimony frequently expressing concern directed to the needs of residents in inner city and poor rural communities. This concern expressed itself in several ways.

   First, a number of organizations commented on the need to adopt a national health program or to maintain and strengthen existing programs, largely Federally-supported, to meet such service needs. These latter programs included such activities as the National Health Service Corps, primary care residency grants, community health centers, and efforts to increase the representation of minorities in medicine. The American Hospital Association, for example, testified that greater financial resources were needed for the provision of medical care to the indigent, particularly in those States with a recognized high dependency on training programs for the provision of care to the indigent.

   Second, many organizations commented on an interrelationship of programs and policies addressing manpower development, educational financing, and health care delivery. They noted that health care available to the underserved would very well be adversely impacted by any contemplated cutbacks in manpower availability (e.g., reduction in resident hours; reduced or eliminated Medicare support for the residency training of FMGs) or cutbacks in graduate medical education (GME) financing generally (e.g., unintended consequences regarding the provision of health care services). In this regard, suggestions were advanced to either resist cutback policies or to recommend policies with phased-in implementation to assure minimal disruption to the provision of health care services.

3. MINORITY REPRESENTATION. A number of presenters commented on a link between the recruitment and involvement of minorities in medicine and national goals of health care service (meeting the needs of underserved communities) and affirmative action. Concern was expressed about current and recent trends in minority enrollment, and implications over time for health services availability to the poor. Tentative positions taken by COGME to date were uniformly endorsed.

   Particular attention was directed to the role of government programs and academic policies in the private sector in removing barriers for minorities to medical education, including access to residency positions. The testimony and Council discussion touched upon several specific issues, including recent legislative developments regarding the allocation of some funds originally targeted for minority students under the Health Careers Opportunity Program to financially needy students who might not be minority; and to an alleged misuse and abuse by residency program directors of standardized testing results in determining minority and non-minority access to selected residency programs. Attention was also directed to the importance of assisting minority students at primary and secondary education levels in addition to "intervention" at later stages of the education process. An additional issue focused on an alleged displacement of minority residents by FMGs, with concerns expressed about the cultural sensitivities of the FMGs to the poor in certain communities.

Organizations testifying supported the direction being taken by the Council regarding the matter of minority representation in medicine, and they proposed a variety of recommendations. Highlights included the following:

* Association of Minority Health Professions Schools (AMHPS)

  Limit indebtedness for those who choose to serve underserved communities
  Reward teaching hospitals to train individuals in primary care to practice in underserved areas
  Expand funding in ambulatory care for GME
  Reward health care institutions which treat a disproportionate share of poor people

* National Association of Minority Medical Educators (NAMME)

  Add minority representation on academic policy making bodies
  Have aggressive affirmative action programs in residency training
  Have a more aggressive approach to financially assist in the cost of a medical education

* American Medical Students' Association (AMSA)

  Provide adequate primary and secondary education
  Remove prohibitive debt loads

* National Federation of Housestaff Organizations (NFHO)

- Fund residency programs having viable affirmative action policy at a higher rate.

* Ruth Hanft

- Continue special support to minority health professions institutions
- Adopt remedial programs and tutorials
  Use special remedial and advanced summer programs
  Provide medical school assistance to historically black colleges to improve science instruction and to provide tutorials
- Link medical schools and "magnet high schools" with large minority enrollments
- Increase National Institutes of Health summer fellowships for minority enrollments
  Return to full scholarships for low-income students, and subsidized loans for lower middle income students

- National Association of Community Health Centers (NACHC)

  Target assistance to those individuals who are more inclined historically to remain in underserved areas despite unfavorable conditions associated with those areas

4. PRIMARY CARE. Many organizations testified to the importance of promoting continued or increased emphasis on primary care skills to meet societal needs. Recommendations advanced in this area frequently called for continued or increased funding of primary care resident education through Title VII grant programs. Also, organizations testified in favor of policies that would increase the relative values of time and cognitive services versus procedures.

5. TRAINING IN AMBULATORY SETTINGS. Testimony received uniformly called for greater attention to the training of residents in ambulatory settings, and supported the preliminary directions adopted by the COGME Subcommittee on GME Programs and Financing. Suggestions proposed to COGME members in this area included studying the financial disincentives to ambulatory based residency training (American Academy of Family Physicians); assuring that direct and indirect medical education costs include residents assigned to ambulatory sites that are required components of educational programs (American Medical Association); undertaking demonstration projects regarding financial incentives and assistance to successfully establish GME programs in ambulatory facilities and program units (American Hospital Association); and funding at a higher rate those residency programs which have a significant portion of their training in out-patient, ambulatory care settings (National Federation of Housestaff Organizations).

6. MEASURING THE ADEQUACY OF PHYSICIAN MANPOWER. A considerable number of organizations commented on the complexities and uncertainties regarding current and future assessments of physician needs or requirements, particularly on a specialty specific basis. Attention was directed to many factors that might impact such analyses, such as physician productivity changes, developments in new technology, and implications of AIDS and other new diseases that might emerge in the coming years. The American College of Surgeons, for example, testified that earlier predictions should be reevaluated in terms of the characteristics of today's health care system.

   Some organizations called attention to their own studies currently being conducted or, in some instances, planned. Recommendations were advanced for encouraging and supporting studies regarding physician specialty and geographic manpower needs. Testimony provided by the Association of Professors of Medicine called for the establishment of a permanent mechanism to assess graduate medical education requirements in the U.S., an effort that should receive adequate funding. At the same time, however, in view of the caveats noted above, testimony was also presented cautioning any policies and decisions adopted solely on the basis of extant manpower projections and analyses.

B. Among the organizations testifying, there were several issues where the Council clearly received contrasting views:

1. PHYSICIAN SURPLUS AND CONSEQUENCES. Overall, only limited concern was expressed regarding the existence of a physician surplus as a critical policy matter. Although many organizations made reference to a physician surplus, calls for public or private sector responses to overall supply conditions were made by only a couple of organizations. For example, the American College of Physicians testified that all medical schools should participate in a national initiative to achieve an overall reduction in medical school enrollments (with steps taken to safeguard against reductions in enrollment among minorities and students from disadvantaged groups). The College further testified that no new medical schools should be established, and no existing schools should increase in terms of class size.

   At the same time, however, testimony was also received questioning the reality of such a surplus. The testimony from Ruth Hanft, for example, noted that there may not be a surplus or an emergent surplus of physicians. She advised the Council that no deliberate effort be made to decrease enrollment.

   With regard to the consequences of a physician surplus, only a few organizations spoke to this issue and the testimony received indicated a lack of concensus. The Council was left with the view that the issue was uncertain: potentially positive consequences (e.g., continued diffusion of physicians; restrictions in waiting times) and potentially adverse consequences (e.g., high costs; unnecessary care; decreasing number of procedures per provider, resulting in diminishing skills).

2. MEDICARE SUPPORT FOR FMG RESIDENTS. The issue of Medicare support for FMG residents frequently arose in testimony addressing priorities to be applied to any cutbacks in Medicare support for graduate medical education. Some organizations, such as the American College of Physicians testified directly and unconditionally that there should be a phased elimination of public financial support from patient care revenues for U.S. residency training of FMGs. A number of organizations advanced the position that the first priority for Medicare funding be given to graduates of medical schools accredited by the Liaison Committee on Medical Education or the American Osteopathic Association. If adequate resources were not available,

these organizations believed that it would be appropriate to gradually withdraw support for the residency training of graduates of foreign medical schools, both aliens and U.S. citizens. A gradual withdrawal was advanced as a moral obligation to existing residents and as a policy to avoid or minimise adverse impact on health service delivery (in the settings heavily dependent on FMGs for such care). At the same time, these organizations generally argued for a continuation of some support (e.g., separate funding source) and/or program (e.g., International Medical Scholars) for a limited number of aliens coming to the U.S. for training and then returning to their home countries. The rationale here included a useful exchange of ideas, enriched education experience, advancement of science, and foreign policy imperatives.

In contrast, a number of other organizations called attention to the excellence of many graduates of foreign medical schools and their contributions to date to our society generally and to meeting some very difficult health service delivery needs specifically. An argument of equity was advanced that labeled as discriminatory any preferential public policy based on location of school. The issue according to these organizations rested mainly on the competence of the individual. That is, if a graduate of foreign medical school were found to be technically competent, any reduction in Medicare funding based solely on school of graduation would be unfair and discriminatory. These organizations also often cited adverse health care service affects from adoption of such a policy, noting that the substitution of these residents by alternate providers was not a cost effective or appropriate option (see "resident substitution" below). It should be noted that included among these organizations was testimony suggesting use of alternative funding sources to support programs affecting FMGs. The Alliance of Foreign Medical Graduates (written testimony sent in to the Council), for example, proposed that 1,000 training slots be created for FMGs in physician shortage geographic areas, funded by foreign aid, with FMGs returning to their country.

In both sets of testimony, some variations occurred, particularly in whether different treatment should be accorded between U.S. citizen and alien graduates of foreign medical schools. For example, the Action Committee for Foreign Medical Graduates testified that U.S. citizens should receive preferential treatment with regard to GME excess, as opposed to foreign nationals who intend to immigrate to the U.S. The testimony of the Action Committee did oppose any quota systems. It continued, however, that if quotas were imposed, alien physicians who are in the U.S. for training only should not be part of the quota but should be excepted.

Attention was also directed to the undergraduate medical education level. For example, the American College of Physicians testified that U.S. public funds should support undergraduate medical education in accredited programs, but should not be used to assist U.S. students to attend unaccredited foreign medical schools.

3. RESIDENT SUBSTITUTION. Related to the Medicare-FMG issue, but also applicable to physician manpower considerations more generally, some testimony was received regarding the matter of substitution of residents by alternate providers. The American Academy of Physician Assistants, for example, supported the tentative view of the COGME FMG Subcommittee that reductions in the financing of GME programs not be undertaken until adequate alternatives for the delivery of care to the medically indigent are in place. In this regard, the Academy reviewed the present role of Physician Assistants (PAs) in a number of settings and recommended policies for expanding the numbers of these providers, including the provision of flexible support for innovative educational approaches and recruitment of new students.

   In subsequent testimony, Dr. Henry Silver encouraged the Council to endorse the widespread use of "associate residents" as substitutes for residents in specialty training programs where surpluses of these specialists exist. Associate residents are specially prepared physician assistants and nurse practitioners who have received an additional short period of training in a specific medical specialty or subspecialty or completed an augmented training experience -- comparable to first year physician residents.

   Other organizations, in contrast, suggested that alternative provider substitution for residents was not a viable option. The Committee on Interns and Residents, for example, presented its view about the costliness of such an approach, citing that the Health and Hospitals Corporation in New York City estimated a cost of $20 million to hire 1200 non-physician ancillary staff to replace resident labor if the proposed resident hours reduction in New York took place.

   Dr. Whitcomb requested the availability to the Council of a broader data base regarding physician assistants, including variations in State practice legislation.

4. ACCOUNTABILITY OF THE CERTIFICATION PROCESS. With regard to current developments regarding the length of residency training in some specialties, several organizations presented the view that those who set the requirements for residency programs should be obligated to take into account the consequences of decisions to increase certification requirements. This testimony, such as that offered by the Association of Academic Health Centers and the American Hospital Association, argued for broadening the input process for decisions rather than for adopting any new regulatory or oversight approach to this area.

   Testimony received from the Association of Professors of Medicine, in contrast, as well as from some other organizations advised the Council that the present multi-faceted mechanism regarding training requirements has worked well and should be retained. Their testimony noted that issues relating to manpower supply or costs should not receive priority in decisions regarding residency training. In written testimony received by the Council, the Association of Program Directors in Surgery urged that the minimum period of surgical education be maintained at 5 years, and that reductions in this amount of time not be supported by COGME. Testimony received from the American Academy of Orthopaedic Surgeons endorsed the view that the ACGME and the ABMS should have the authority to control the content and length of residency education. The American College of Surgeons noted that the number of residency years has been determined by educators and is under constant review.

C. With regard to issues in the physician manpower area, highlights of testimony received by the Council included the following:

1. In general, testimony received by the Council tended to confirm that the earlier list of manpower issues developed by this Subcommittee was relevant.

2. In the area of primary care, testimony received was somewhat in contrast to earlier testimony (from some of the same organizations) obtained by the Physician Manpower Subcommittee. Testimony provided by the Academy of Family Physicians and the Society of Teachers of Family Medicine (written testimony only) did attest to the Subcommittee's tentative view that a significant shortage existed with regard to family practitioners. Testimony received from organizations representing internal medicine and pediatrics, however, called attention to suggested shortages or balance in general internal medicine and general pediatrics, in variance to views presented to the Council at earlier occasions. The Association of Professors of Medicine, for example, noted that "current information suggests that there may be an undersupply of physicians providing general adult medical care in the fields of family medicine and internal medicine." The American Academy of Pediatrics (AAP) testified that the projected supply of pediatricians represents a balanced rather than an oversupply condition. This organization recommended that the current levels of pediatric residents should be maintained until data are found to substantiate either an increase or decrease in the numbers of residents based upon childrens' health care needs. The AAP stressed that the pediatric manpower needs would be significantly affected by any adoption of needed insurance coverage to meet the health needs of the uninsured youth population in this country.

3. With regard to primary care, furthermore, the American College of Obstetrics and Gynecology (ACG) submitted written testimony recommending that the Subcommitee on Physician Manpower include obstetrics and gynecology in the context of its discussion of primary care. A number of other organizations, mainly representing individual specialties, called attention to the primary care services provided by many different types of physicians. Regarding any analysis of physician manpower furthermore, the American College of Surgeons suggested that such studies should use three categories: (a) general and internal medicine, family practice, and general pediatrics; (b) the surgical specialties; and (c) the "other medical specialties." The College also commented that the concept of "primary care" should be clearly defined or dropped.

4. Testimony was received from a number of other individual specialty groups that called for recommendations to remedy current impending shortage conditions regarding these disciplines. In particular, this included shortages in general psychiatry, child and adolescent psychiatry, emergency medicine, and preventive medicine.

5. Four organizations representing the osteopathic community recommended to COGME that its subsequent deliberations and recommendations provide separate attention to allopathic and osteopathic physicians. Testimony received reviewed the primary care practice of most osteopathic physicians and highlighted the value of the osteopathic educational configuration as a model for graduate medical education generally.

6. As noted earlier in this synopsis, access to care was a pervasive issue, with the geographic distribution of physicians in both inner city and rural areas of considerable concern. Testimony received also reaffirmed the Council's earlier tentative views regarding the importance of addressing the representation of minorities in medicine. A number of the recommendations provided by organizations are highlighted in Exhibit B to this overall Hearing summary.

7. The need for additional manpower for geriatric care was noted by a few organizations.

8. A number of organizations cited data needs in the area of physician manpower, often on a discipline specific basis. For example, the American Academy of Child and Adolescent Psychiatry recommended that data collection regarding the prevalence and utilization of psychiatric services by children and adolescents, as well as the availability of those services, should begin as soon as possible. Other organizations, such as the American College of Cardiology and the American College of Gastroenterology, made reference to recently completed reviews and current studies being done under their auspices that would be of value to the Committee's deliberations. More generally, many organizations cited the continued need for current information on physician manpower, particularly by specialty, before recommending any policy changes. Recommendations were advanced for increasing COGME's staff and resources to this end, as well as for undertaking national public-private sector initiatives in this area.

9. Several organizations recommended specific modifications to current statutory authorities, regulations, and administrative directives. Highlights included: (a) a written National Health Service Corps policy should be adopted requiring the placing of Corps' trained child and adolescent psychiatrists in sites that allow the treating of children and adolescents (American Academy of Child and Adolescent Psychiatry); (b) expand the Health Education Assistance Loan program to include physician assistant students as eligible applicants (American Academy of Physician Assistants); (c) seek relief from

potential diversion of Health Careers Opportunity Program funds for supporting purposes somewhat inconsistent from original intent of legislation (National Association of Medical Minority Educators); (d) repeal of Federal legislation and regulations that mandate maintaining specified enrollment in U.S. medical schools (American Medical Association); and (e) a decrease in the "continuity requirement" in implementation of Title VII grants as they apply to general internal medicine residency programs (Association of Program Directors in Internal Medicine).

10. Some organizations specifically cautioned against any new intervening government action regarding specialty mix before adequate study. The American Academy of Orthopaedic Surgeons commented that only when comprehensive and valid data are analyzed should the Federal government attempt to influence specialty mix and geographic distribution of physician manpower. Similarly, the American College of Gastroenterology testified that no artificial or arbitrary limits should be imposed on physician mix until adequate study is undertaken.

D. With regard more specifically to issues in the foreign medical graduate area, highlights of testimony received by the Council included the following:

1. An issue of equity and moral obligation did underly much of the testimony received regarding foreign medical graduate issues, with views mixed on the question. For example, the Association of Professors of Medicine expressed its view that it does not believe that graduate medical education and the U.S. have an obligation to train all qualified foreign born medical graduates who may wish to enter the U.S. to practice. As stated by Mahendr S. Kochar, M.D., in contrast, in written testimony received by the Council... "America has come to be what she is because of her highly motivated, hard working immigrants who have come to this land seeking greater opportunities and, in turn, have added to her glory. It would be inappropriate to shut off or diminish this infusion of brain power into the United States." At the same time, the American Psychiatric Association commented that the U.S. has a moral obligation and responsibility to support FMG physicians who are currently in the system either by virtue of being residents or in practice.

2. As noted earlier, the matter of Medicare support for FMGs in residency training received considerable testimony, often mixed in nature. Testimony was uniform, however, that should COGME adopt any recommendations which would have the net effect of reducing the number of FMGs in this country, consideration would also need to be given by the Council to addressing any negative access consequences of such an outcome.

3. A number of organizations testified in support of adopting one examination for all applicants for entrance into graduate medical education. Views were expressed that the current dual examination

process was discriminatory against U.S. and alien graduates of foreign medical schools. The testimony received from St. Georges University School of Medicine, stating its view that its students would "do better" on the NBME, included an offer at the expense of the University to fund a study where a group of its current students, either in total or randomly selected, would be allowed to take the FMGEMS examination and the National Board examination the next time they are given. Testimony regarding the current status and equivalency of the dual examination pathway was provided by representatives of the Educational Commission for Foreign Medical Graduates and the National Board of Medical Examiners, although information was not advanced regarding the rationale for the present examination system.

Concerning the matter of individual testing and competence, several organizations, such as the American Hospital Association, recommended the addition to the ECFMG certification process of a clinical skills assessment and a test for spoken English. The American Academy of Pediatrics testified that all candidates for pediatric residency programs should take uniform qualifying examinations and that foreign trained physicians should undergo clinical and language competency evaluations.

5. Interest was consistently expressed in continuing an international exchange visitor program of one form or another. Some suggestions were offered that a funding source separate from Medicare might be appropriate for this purpose (e.g., foreign aid account; separate FMG educational account). With further regard to exchange visitors, the Inter-American College of Physicians and Surgeons recommended that the U.S. should consider the organization of a "true" international health service corps which would be composed mainly of U.S.-trained exchange visitor physicians. As noted earlier, the Alliance of Foreign Medical Graduates recommended in written testimony that 1,000 training slots should be created for FMGs in physician shortage geographic areas, funded by foreign aid, with FMGs subsequently returning to their home country.

6. Other highlights of testimony that focused on foreign medical graduate issues included the following:

   A. A number of organizations commented that the integrity of residency educational programs needed to be safeguarded. COGME members were advised that programs whose principle functions have become the staffing of institutional clinics should be reduced or eliminated. These views were reactions to concerns expressed earlier by the COGME FMG Subcommittee that service needs were not viable rationale for maintaining poor quality residency programs.

   B. In the context of testimony addressing FMG issues, a number of organizations expressed the principle that no person has an absolute right or entitlement to a residency position. The American Hospital Association specifically noted that this principle extended to graduates of U.S. medical schools.

C. The American Bureau of Medical Advancement in China testified that a new coordinating mechanism should be established regarding FMGs studying in this country and returning to their home countries, that is, a council to establish standards, accredit agencies, monitor the U.S. training of FMGs, and maintain a registry. Placement services for FMGS administered nationally might serve a purpose if a funding source were identified; however, the organization testified that such a national process should not become an exclusive pathway.

E. With regard to issues in the area of graduate medical education programs and financing, highlights of testimony received by the Council included the following:

1. A general view was expressed among most organizations that a crisis situation did not exist regarding the financing of graduate medical education. At the same time, a recognition existed that Medicare funding support for GME remained a vulnerable area for budget cutbacks by the Federal government. The Council was frequently advised that any decisions to change the current financing system should be done cautiously and incrementally. As noted earlier, potentially adverse consequences to indigent medical care was one factor given as a rationale for an evolutionary rather than a revolutionary approach to this area. In view of a perceived absence of a crisis situation, concerns about potentially unintended consequences for the graduate medical education experience represented another major rationale for a cautious approach to policy change. The American Hospital Association testified that any new method for financing GME should be strongly reliant on multiple sources of public funding.

2. Similarly, a general view was expressed to the Council that patient care revenues should continue to be the major source of funding for graduate medical education. A variation to this view called for maintaining the present funding mechanisms until a workable alternative can be demonstrated to adequately support residency training and its related service activities. In this regard, a few organizations noted that any extensive reliance on private practice plans as a workable alternative for the financing of GME is unrealistic, except perhaps in a few institutions.

3. Similarly, most organizations testified that payments for the direct costs of graduate medical education should be continued through existing mechanisms utilizing current sources, conduits, and recipients. Attention was given, however, to the frequent existence of wide variations in these costs as covered by Medicare funding.

4. The present system for reimbursement to teaching hospitals was frequently endorsed by testifying organizations. The American Medical Association, for example, testified that the Medicare indirect medical education adjustment should be continued at an

adequate level to compensate teaching hospitals for their additional costs in training residents. The AMA noted that care for the indigent must be funded separately. A number of organizations testified in opposition to further cuts in the indirect cost adjustment.

The Committee of Interns and Residents argued that the system should be refined to further provide incentives for resident physicians to train and work in the areas most needed by society -- socio-economically, geographically, and by specialty. The Association of Minority Health Professions Schools testified that teaching hospitals must be rewarded to train individuals to practice primary care in underserved communities.

5. The Programs and Financing Subcommittee tentatively concluded that a broad based study of medical education undertaken by the private sector might be appropriate at this time. Testimony received from the American Hospital Association questioned why the lead for such an initiative might not be undertaken under the auspices of COGME, particularly given its charge from Congress. A few presenters agreed that such a review would be in order. Dr. Martha Gerrity proposed an examination of the tradition, structure, and financing of academic medical centers. She suggested that the Robert Wood Johnson Foundation be contacted to request use of the national meeting of the clinical scholars program as a think tank for addressing the problems of medical education. She also suggested including people who are developing new methods for education or new ways at looking at health care in this group.

6. Other highlights of testimony that focused on financing issues included the following:

   A. John S. Davis, M.D., from the Mary Imogene Bassett Hospital (Cooperstown, New York) and focusing on situations facing rural hospitals and their opportunities for graduate medical education, proposed that Federal direct and indirect Medicare payment formula should be modified to be in line with the economic realities of smaller institutions.

   B. The Association for Hospital Medical Education suggested that the solution to stop cost shifting is to initiate a fixed percentage add-on (to salary levels under direct costs) for the added indirect expense (e.g., overhead).

   C. The American Academy of Child and Adolescent Psychiatry recommended that Federal support for the discipline can be encouraged through the continuation of Medicare's direct payment for the 5th year of this specialty under its GME programs.

   D. A number of organizations testified that Medicare should pay its fair (proportionate) share of the costs of graduate medical education.

E. Ruth Hanft advanced a number of recommendations in the financing area, including: a revenue tax could be placed on all third-party financing (including self insurance to support GME); medical schools should pay residents for benefits received; and tuition should be charged for subspecialty training. She advised the Council that the 1976 Institute of Medicine study in the financing area should be considered.

F. The American Medical Association testified that resident physicians should not be permitted to bill directly for patient care services.

G. The American Medical Student Association noted that a relative value scale for reimbursement in the Medicare and Medicaid programs would lead the way for private insurance programs to do the same.

H. Testimony offered by four osteopathic organizations included proposals to allow bonus reimbursement to institutions with over "x" percent trainees in primary care, through the indirect payment adjustment. Reimbursement support for ambulatory training should include some reimbursement for the ambulatory training supervisor.

Adjournment

At the beginning of the November 20 session, the Council adopted the minutes for the October 6, 1987 plenary session. In closing, both Dr. Vanselow and Dr. Satcher thanked the many organizations for their cooperation in making the Public Hearing a productive activity for the Council's deliberations. Acknowledgments were also given to the Health Resources and Services Administration staff and The Circle, Inc., staff (contractor) for their effective handling of all logistical preparations.

EXHIBIT A

HEARING AGENDA

Following is the list of organizations and presenters that appeared at the Hearing, followed by a list of the organizations and individuals who submitted written testimony but did not appear at the November 19-20 session:

1. American Academy of Physician Assistants
   Bill Finerfrock
   Director of Federal Affairs

2. American Association of Colleges of Podiatric Medicine
   Gary M. Lepow, D.P.M., M.S.
   Chairman, Council of Teaching Hospitals for Podiatric Medicine
   Member, Board of Governors

3. Professor of Pediatrics
   Henry K. Silver, M.D.
   Associate Dean for Admissions
   University of Colorado
   School of Medicine

4. Association of Academic Health Centers
   Clayton Rich, M.D.
   Chairman-elect

5. Association of American Medical Colleges
   Joseph A. Keyes, Jr.
   Vice President

6. Association of Minority Health Professions Schools
   Stanford A. Roman, M.D.
   Dean
   Morehouse School of Medicine

7. National Association of Medical Minority Educators
   Arthur Hoyte, M.D.
   School of Medicine
   Georgetown University

8. American Medical Student Association
   P. Preston Reynolds, M.D.
   President

9. Committee of Interns and Residents
   Janet Freedman, M.D.
   President

10. National Federation of Housestaff Organizations
    David Marder, M.D.
    President

11. Ruth S. Hanft
    Independent Health Policy Consultant

12. Martha S. Gerrity, M.D.
    Fellow and Clinical Instructor Division of Clincial Epidemiology and
    General Medicine University of North Carolina

13. Association of Professors of Medicine
    Harold J. Fallon, M.D.
    President

14. Association of Program Directors in Internal Medicine
    Eleanor Wallac[illegible] M.D.
    President

15. Association for Hospital Medical Education
    Thomas C. Gentile, Jr.
    Chairman
    Member Services Committee

16. American Hospital Association
    Alexander H. Williams
    Senior Vice President

17. American Osteopathic Hospital Association American Osteopathic Association
    American Association of Colleges of Osteopathic Medicine
    Academy of Osteopathic Directors of Medical Education
    Michael I. Opipari, D.O.
    Vice President of Medical Education Detroit Osteopathic Hospital Corporation

18. National Association of Community Health Centers
    Aaron Shirley, M.D.
    Executive Director
    Jackson-Hinds Comprehensive Health Center Jackson, Mississippi

19. John S. Davis, M.D.
    Director of Medical Education Mary Imogene Bassett Hospital
    Cooperstown, New York

20. American Medical Association
    Frank A. Riddick, M.D.
    Member
    AMA Council on Medical Education AMA Representative to LCME

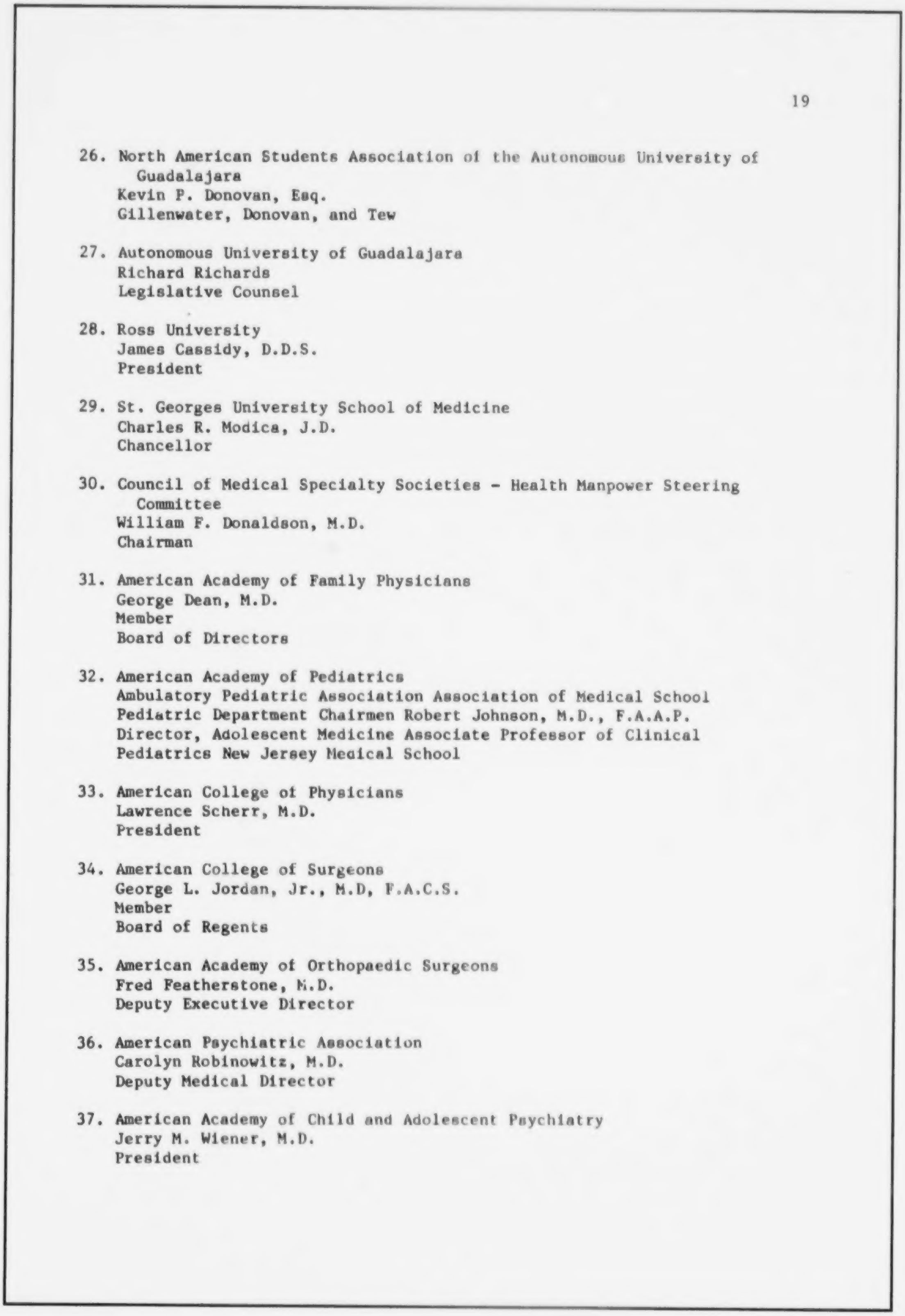
21. Medical Society of the State of New York
    David Benford, M.D.
    President

22. Educational Commission for Foreign Medical Graduates
    Thomas W. Mou, M.D.
    President
    National Board of Medical Examiners
    Jerry Dillion, M. Ed.
    Senior Psychometrician

23. American Bureau for Medical Advancement in China
    H. William Harris, M.D.
    Vice President

24. Inter-American College of Physicians and Surgeons
    Maria Garcia
    Director
    Cross Cultural Medicine Programs

25. Action Committee for Foreign Medical Graduates
    Miriam Jacobs
    Executive Director



26. North American Students Association of the Autonomous University of Guadalajara
    Kevin P. Donovan, Esq.
    Gillenwater, Donovan, and Tew

27. Autonomous University of Guadalajara
    Richard Richards
    Legislative Counsel

28. Ross University
    James Cassidy, D.D.S.
    President

29. St. Georges University School of Medicine
    Charles R. Modica, J.D.
    Chancellor

30. Council of Medical Specialty Societies - Health Manpower Steering Committee
    William F. Donaldson, M.D.
    Chairman

31. American Academy of Family Physicians
    George Dean, M.D.
    Member
    Board of Directors

32. American Academy of Pediatrics
    Ambulatory Pediatric Association Association of Medical School
    Pediatric Department Chairmen Robert Johnson, M.D., F.A.A.P.
    Director, Adolescent Medicine Associate Professor of Clinical
    Pediatrics New Jersey Medical School

33. American College of Physicians
    Lawrence Scherr, M.D.
    President

34. American College of Surgeons
    George L. Jordan, Jr., M.D, F.A.C.S.
    Member
    Board of Regents

35. American Academy of Orthopaedic Surgeons
    Fred Featherstone, M.D.
    Deputy Executive Director

36. American Psychiatric Association
    Carolyn Robinowitz, M.D.
    Deputy Medical Director

37. American Academy of Child and Adolescent Psychiatry
    Jerry M. Wiener, M.D.
    President

38. American College of Emergency Physicians
    Jacek B. Franaszek, M.D., FACEP
    Vice President

39. American College of Preventive Medicine
    Terence Collins, M.D.
    Chair
    Graduate Education Committee

40. Association of Preventive Medicine Residents
    Michael D. Parkinson, M.D., M.P.H.
    President

41. American College of Cardiology
    Samuel Fox, M.D.
    Past President

42. American College of Gastroenterology
    Michael Mogadam, M.D.
    Member
    National Affairs Committee

Written Testimony Only:

A. Alliance of Foreign Medical Graduates
   Navin Shah, M.D.
   Co-Chairman

B. American Academy of Physical Medicine and Rehabilitation
   Richard E. Verville

C. American Association of Neurological Surgeons Congress of Neurological Surgeons
   Clark Watts, M.D.

D. American College of Obstetricians and Gynecologists

E. American Society of Clinical Oncology
   B. J. Kennedy, M.D.
   President

F. American Society of Hospital Pharmacists
   Beverly L. Black
   Director
   Management and Reimbursement Department

G. Association of Program Directors in Surgery
   Paul Friedmann, M.D.
   President

H. Howard University Hospital and College of Medicine
Washington, D.C.
Martin Dillard, M.D.
Assistant Dean for Clinical Affairs
Assistant Medical Director Clinical Affairs

I. Independent Association of Physician Alumni of the Autonomous University of Guadalajara
Neil Aldoroty, M.D.
Chairman
Ted W. Switzer, M.D.
Chairman-Elect
Helen M. Baker
Executive Director

J. Parents League of American Students of Medicine Abroad
Samuel N. Feinsod
President

K. San Juan Bautista School of Medicine
Commonwealth of Puerto Rico
Juan A. Chaves Abreu
President

L. Society of Teachers of Family Medicine

M. Mahendr S. Kochar, M.D.
Assistant Dean
Office of Graduate Medical Education Medical College of Wisconsin

N. B. F. Overholt, M.D.
Gastrointestinal Associates, P.C.
Knoxville, Tennessee

EXHIBIT B

INDIVIDUAL ORAL TESTIMONY SUMMARIES

The following narratives present highlights of the oral testimony presented to the Council. It should be noted that each COGME member had the benefit of reviewing the complete written testimony provided by each organization. At the time of this writing, plans are underway to make available to all interested parties the complete set of written testimony as prepared by all organizations:

1. Bill Finerfrock, representing the American Academy of Physician Assistants and the Association of Physician Assistant Programs, responded to proposed changes in Federal financing of graduate medical education. To cope with the reductions, he urged the

replacement of residents with PA's as a viable and cost-effective alternative and cited examples of successful hospital implementation of PAs (with no reduction in quality of care) as evidence that the market for PAs would remain strong. One of the two concerns with this approach, Medicare reimbursement policies, was, he said, clarified in a July 28 letter sent to the Council Chairman. He called the other concern, availability of PAs, "the most critical issue that the Council can and must address." He cited an increased specialty thrust in the PA applicants and programs, with at least 11 postgraduate, hospital-based programs being offered. He recommended that provisions be made to expand educational programs for alternative health care providers; that funds for PA education be more flexible to allow, e.g., for innovative approaches to education and for marketing to increase applicant pools; and that PA students be eligible for the Health Education Assistance Loan Program. He encouraged the Council to ensure an adequate supply of non-physician providers to meet hospital manpower needs. Mr. Finerfrock fielded questions from the Council regarding PAs in underserved areas and in teaching hospitals, PAs as primary care providers, and PA salaries.

2. Dr. Gary Lepow, representing the American Association of Colleges of Podiatric Medicine, gave background on the nation's 10,000 podiatrists, who provide preventive and primary podiatric medical care as well as rehabilitative care and surgery. They have traditionally been self employed in solo office practices but are now participating more in group practices -- HMOs, PPOs, and IPAs. Graduate programs provide specialty training and preparation for board certification. Decreases in podiatric residency positions and programs can be attributed to lack of GME funds and increases in hospital closures. He proposed: (1) continued emphasis on primary health care providers and support for their training; (2) continued use of the current scheme of financing types of services; and (3) continued grant-and-contract public health service programs in support of primary care training. In response to questions, Dr. Lepow discussed preceptorship programs, insufficient graduate programs, increased competition for residency positions, decreased application for the basic professional program, sources of funding for GME in podiatry, and the effect of malpractice insurance and cost of podiatric care on number of applicants.

3. Dr. Henry Silver, Professor of Pediatrics and Associate Dean for Admissions at the University of Colorado School of Medicine, Denver, proposed that the Council endorse widespread utilization of associate residents to reduce health manpower problems. He defined associate residents as PAs and nurse practitioners with an additional short period of training in a medical specialty or subspecialty. He discussed, point by point, how widespread use of associate residents would provide a significant reduction in the oversupply of physicians, would be cost effective for hospitals, would fill the

gaps when swings in physician supply occur, would help fill the positions of foreign medical graduates should they be restricted from entering training programs, would fill unmatched positions in internal medicine and pediatric training programs, would provide more professional incentives for nurses (thus stimulating their recruitment and retention) would provide substitutes for residents whose hours of duty are limited by legislation, and would relieve overworked house officers in house staff training programs of some patient care responsibilities. Dr. Silver responded to Council members' questions on associate residents concerning their salaries, their impact on the nursing shortage, and their successful integration into physicians' practices.

4. Dr. Clayton Rich, representing the Association of Academic Health Centers, presented views on several issues facing the Council. (1) Because of shorter patient hospital stays and an increase in ambulatory care at non-hospital sites, he urged the Council to recommend that all GME programs, not just those paid for through hospitals, be included in the mechanism for Medicare direct payments. (2) Policies established by the specialty certifying boards and residency review committees should take into account the consequences to the institutions where the training takes place. Representatives of academic health centers should have an opportunity for review of such policies since they are impacted by the decisions. (3) Medicare and Medicaid funds should not support the GME of FMGs who obtained medical degrees from schools not accredited by the Liaison Committee on Medical Education (LCME) or the BPE unless these students' competence can be established unequivocally. (4) Hospitals that care for the poor should not be dependent on the availability of FMGs, whose qualifications are in doubt. (5) It is inappropriate to reduce enrollment in our medical schools unless there is control over the number of FMGs who enter the U.S. from schools not approved by the LCME or BPE. Dr. Rich responded to questions on requiring more accountability on graduate medical programs and financing GME with patient revenues and financing GME in an ambulatory setting.

5. Mr. Joseph Keyes, Association of American Medical Colleges, (substituting for Dr. Petersdorf, who was ill), discussed in his oral testimony the AAMC's task force on physician supply formed in May 1987, and outlined key committee issues. The committee chaired by Dr. Farber has reviewed data on physician supply and its possible effects on the size and quality of the applicant pool, the implications for a society with an oversupply of physicians, increasing the number of underrepresented minority physicians, and influencing student preferences between generalist and specialist practices. Issues on residency training being studied by the Committee chaired by Dr. Rabkin include the preservation of education as the essential goal of residency training; the development and financing of mechanisms to meet service loads not properly assignable

to residents; the development and financing of residency training in non hospital settings; and the promotion of increased primary care resident education. The committee chaired by Dr. Moye is focusing on issues related to foreign medical students and graduates including measuring the quality of FMGs entering U.S. programs, evaluating programs that attract only FMGs, the need for bilingual physicians, and the perceived obligation to provide specialists and educators to foreign countries. The committee chaired by Dr. Korn intends to develop proposals and recommendations to ensure a steady flow of talented students in biomedical research and training programs. Mr. Keyes fielded questions on coordinated planning for allopathic and osteopathic schools, identifying medical services in short supply, and assessing clinical skills in students.

6. Dr. Stanford Roman, representing the Association of Minority Health Professions Schools, underscored the importance of national policies on the eight institutions represented by his Association since they all rely heavily on Federal funding. He discussed the underrepresentation of minorities in medical schools, the need for medical services in minority and underserved communities, and the tendency for minority health professionals to choose underserved communities. He cited the 1985 HHS report of the Task Force of Black and Minority Health that confirmed the disparities in health status among blacks and whites and recommended increasing the training of black and other minority health professionals. On behalf of his association, Dr. Roman recommended removing economic barriers to a medical education by limiting the indebtedness of those who choose underserved communities; rewarding teaching hospitals that train students who choose primary care and underserved communities since those institutions disproportionately serve poor people; and expanding the funding for GME in ambulatory care settings. Dr. Roman replied to questions on the source of funds for individuals who choose underserved communities.

7. Dr. Arthur Hoyte, representing the National Association of Minority Medical Educators (NAMME), described the NAMME as an organization of 180 to 200 active, dedicated members who donate either time or money to support activities and have no full-time staff. They are concerned about policy and resource allocation decisions affecting the Health Careers Opportunity Program (HCOP). According to Dr. Hoyte's oral testimony, 40 percent of funds earmarked for HCOP, which historically was targeted for minority students, is being presently considered for direction to financially needy students. NAMME members, more than half of whom have grants from the HCOP, fear that their funds are being diverted. The action appears to be a result of the HCOP's inability to show cause and effect relationship between the funding and the enrollment/graduation of minority students, a task Dr. Hoyte considers impossible. He also discussed

the adverse effect on minorities resulting from standardized tests to screen residency program applicants and candidates for medical school graduation. Individuals who have not had the skills nurtured and cultivated to do well on tests such as the SAT, MCAT, and the national boards will not be among the higher scorers and will be denied residencies and graduation. Dr. Hoyte replied to questions from Council members on the debt burden of minority health professionals and the displacement by FMGs of minority candidates for residency programs.

8. Dr. Preston Reynolds, representing the American Medical Student Association, said the 43,000 student and resident members of her organization were committed to enriching medical education and assuring access to quality health care for all people. She discussed the role of the U.S. government in financing GME and cited high mortality rates resulting from an inadequate supply of primary care physicians and a health manpower shortage in underserved areas. In spite of general physician surpluses, 3 million Americans are being deprived of even the most basic care. Few are choosing the underserved areas because of heavy debt burdens (over $36,000 for a medical school graduate in 1987) and limited financing options for low and moderate income students. Admission standards and costs are denying minorities access to GME. She recommended a stronger, active role by the Federal government in solving the myriad of problems in GME. Financial incentives should reward students in primary care fields, support residencies which emphasize outpatient clinical training, stress preventive medical skills, and improve resident working conditions. She recommended greater funding for the National Health Service Corps to recruit physicians for health manpower shortage areas and a strengthening of primary and secondary education for minorities.

9. Dr. Janet Freedman, representing the Committee of Interns and Residents, presented evidence of the dramatic increase of demands on residents and stressed the role of the Federal government in protecting the health care priorities of our society. She urged the Council to propose recommendations and policy that are based on an accurate understanding of the work of residents and the quality of health care they provide patients. She described residents not as recipients but as workers who provide essential medical services, spending 90 percent of their time in direct patient care and working 90 to 100 hours/week. Earning an average of $21,000/year (for 100 hours/week), residents are the lowest paid health professionals. Residents provide the bulk of medical care to the nation's poor. Dr. Freedman recommended (1) maintaining Medicare funding from patient care revenues for residency programs; (2) supporting one examination for all medical graduates that would be equitable to FMGs, who serve the underserved communities U.S. graduates shun; (3) refining the differential system for reimbursement to teaching hospitals to

provide further incentives for resident physicians to train and work where needs are greatest; and (4) using public sector money to provide health care for all and influencing the private sector to carry its share. Discussion followed concerning the responsibilities of the Federal government and the private sector in funding GME and assessing future needs.

10. Dr. David Marder, representing National Federation of House Staff Organizations, advocated reforms in the restructuring of residency programs within the context of developing a national health program that provides access to quality care for all Americans. To address the problem of the maldistribution of doctors geographically, socio economically, and by specialty, Dr. Marder proposed that the Congress set higher funding rates for (1) residency programs in hospitals which serve a disproportionate share of the medically indigent; (2) residency programs which train physicians in primary care and in specialties where there are shortages (specifically, family practice, internal medicine pediatrics, obstetrics/gynecology, preventive and occupational medicine, psychiatry, geriatrics, and rehabilitation medicine); (3) residency programs with significant training in outpatient ambulatory care settings (would encourage ambulatory primary care sites in lieu of the teaching hospital emergency room for non-emergency care); and (4) residency programs which have a viable affirmative action policy (since studies show that minority physicians are much more likely to serve minority patients and a disproportionate share of the medically indigent). Discussion with Council members centered on identifying areas of less critical need and methods for cutting those funds, government intervention in administering funds to hospitals, and the mechanisms for implementing a national health program.

11. Ms. Ruth Hanft, an independent health policy consultant, outlined in her oral testimony the following actions to increase the balance of primary care physicians vs. specialists: (1) Further reduce Medicare direct payments in specialty training and increase them for primary care training. (2) Increase other direct grant support for primary care, particularly ambulatory care training. (3) Charge tuition for subspecialty training. (4) Stimulate the growth of the joint general medicine and pediatrics programs. (5) Restructure physicians' fees under Medicare and Medicaid. (6) Increase the relative values of time and cognitive services vs. procedures. To increase the enrollment and retention of minorities in medical school and high schools and to keep the opportunity open for low income and lower-middle-income students, she proposed (1) linkages between medical schools and high schools with large minority enrollments; (2) assistance by medical schools to historically black colleges in basic science instruction; (3) special remedial and advance summer programs to minority health professions institutions; (4) renewed medical school efforts to recruit minority students and minority faculty; and (5) a return to

full scholarships for low-income and subsidized loans for lower-middle-income students. She suggested changes in the financing of GME that take into account all the beneficiaries--patients, hospitals, teaching physicians, medical schools, and students. In reply to questions, Ms. Hanft said payment for resident supervision should be disallowed to teaching physicians who bill fee for service; salaries should be paid to residents in primary care (to the first certification level) and tuition charged for subspecialty training; and Medicare and other third party payments to specialists should be lowered and it should be raised for the cognitive skills.

12. Dr. Martha Gerrity, fellow and clinical instructor, Division of Clinical Epidemiology and General Medicine, University of North Carolina, shared her "grassroots perspective" of the trends in GME by presenting a five-point "rationale": (1) Medical education is a fragmented, internally competitive system, recalcitrant to change, without an external framework. (2) The education of physicians along with health care is a collective good. (3) Funding of GME should be administered and regulated at the same governmental level. (4) The Federal government is the best lever for implementing national policy. (5) A framework to make nationwide changes in medical education can be created for a relatively small cost of financing GME. She outlined a framework for funding based on need and accountability and made several suggestions for a broad-based review of the structure and content of medical education. Dr. Gerrity fielded questions from Council members on administering grants equitably, incentive programs, and administering non-Medicare sources of payment for hospital expenses.

13. Dr. Harold Fallon, representing the Association of Professors of Medicine (APM), said the mission of the APM is to enhance the education of physicians in internal medicine, related specialties, and in biomedical research and noted that the APM is the current host of the Federated Council on Internal Medicine. Profound changes in health care delivery in the U.S., especially in the field of internal medicine, require an extensive reassessment of manpower need. For internal medicine, major factors should include: (1) Technological advances in cardiology and gastroenterology, e.g., have resulted in new procedures which have decreased the need for surgical intervention and increased the demand for technically skilled internists. (2) The increasing age of the American population has raised requirements for physician services in virtually all aspects of internal medicine. (3) Young physicians expect more leisure time and assumptions of a 60-plus hour week may be invalid in assessing manpower needs. Also, estimates indicate that women, who make up one-third of residents, devote 10 to 40 percent fewer lifetime hours to the practice of medicine than men. (4) If medical care is provided to needy Americans as a national policy, the demand for internal medicine services would increase. The APM makes the following recommendations: (1) the establishment of a permanent mechanism to assess GME requirements in the U.S.; (2) access by all U.S. medical graduates to adequately financed GME; and (3) financial

support for only a select number of FMGs who plan to return to their native land. In the discussion, Dr. Fallon added that the APM strongly endorses appropriate health care for all Americans, regardless of ability to pay.

14. Dr. Eleanor Wallace, representing Association of Program Directors of Internal Medicine (APDIM), said APDIM represents 440 residency training programs in internal medicine, some of which serve large, indigent populations and many of which have become highly FMG-dependent. Many programs are very dependent on residents to fill the acute inservice demands. Resources have not permitted shifting trainees to ambulatory sites, and cost-containment efforts have deterred hospital administrators from funding alternative health care deliverers to free up residents. Recognizing a need for real changes in these programs, APDIM undertook a survey in 1985 to identify problems and arrive at solutions. Results indicate: (1) The majority of residents in internal medicine training are receiving inpatient subspecialty focus training. (2) Ambulatory training, remains, for the majority, a one-half day a week experience in hospital clinics. (3) Relatively few programs offer an array of primary care-related rotations in psychosocial skills, office surgical subspecialties, preventive medicine, etc., and fewer residents choose those over the standard subspecialty rotations. Dr. Wallace concluded that it is time to restructure internal medicine residencies and called for better data, cost estimates, and a source for funding the move from hospitals to ambulatory care sites. In the discussion, Dr. Wallace commented that the downsizing movement has not yet applied to hospitals in large cities, that these facilities are overcrowded and that only a limited number of the services could be shifted to ambulatory sites without adversely affecting the delivery of services.

15. Dr. Thomas C. Gentile, representing the Association for Hospital Medical Education (AHME), noted that his organization serves as a forum for the exchange of ideas and positions on national policy concerning the problems of graduate and continuing medical education and community hospitals. He explained the three-part division of GME reimbursement: (1) Direct expense--limited to stipends and/or salaries of residents in training. (2) Indirect expense--relative to faculty salaries, depreciation, dietary expense, employee benefit expense, secretarial costs, administrative and general expenses, etc. (3) Indirect medical education adjustment--reimburses teaching hospitals vs. non-teaching hospitals for the severity of illness, which is higher in teaching hospitals. To finance GME in a more equitable manner, the AHME has proposed that a fixed percentage of 150 percent of the resident's salary be utilized as the indirect expense. This formula allows for regional salary or stipend differentials, yet provides a fixed percentage for all institutions. Further, it eliminates the temptation to shift costs and simplifies the process. Discussion included the disparity in costs per resident per year and further explanation of the formula presented by Dr. Gentile.

16. Alexander Williams, representing the American Hospital Association (AHA), highlighted the following positions of the AHA on issues on GME in his oral testimony: (1) The integrated financing of residency training is appropriate. (2) Direct costs should continue to be reimbursed through existing mechanisms. (3) Alternate sources and methods of financing GME should be explored, but any new method should remain strongly reliant on multiple sources of public funding. (4) Reliance on faculty practice plans as a major source of funds is unrealistic. (5) Greater use of ambulatory training sites is necessary and inevitable, and incentives for same should be supported. (6) The hospital industry should have a role in decisions to lengthen residency training programs. (7) Current certification procedures sponsored by the Education Commission for Foreign Medical Graduates (ECFMG), with the additions of clinical skills assessment and a test for spoken English, should be applied to FMGs. (8) FMGs should not become an acceptable means of assuring medical manpower in underdeveloped and underserved areas. (9) The Council (with the assistance of the affected constituencies), rather than the private sector, is expected by the Congress to undertake a broad-based review of the structure and content of undergraduate and graduate medical education.

17. Dr. Michael Opipari, representing American Osteopathic Hospital Association, American Osteopathic Association, American Association of Colleges of Osteopathic Medicine, and Academy of Osteopathic Directors of Medical Education, stated the belief of the osteopathic profession, that for manpower planning purposes, osteopathic physicians should not be aggregated with allopathic physicians. Some 80 percent of all osteopathic physicians are primary care physicians, a public health goal of the U.S., and there is a shortage of osteopathic internships, which are primary care positions. Dr. Opipari cited data to demonstrate the cost-effectiveness of the osteopathic medical education model. The average cost per year for a trainee, for example, is $25,000-35,000 versus $55,000 in the allopathic system. Volunteer faculty in the teaching hospitals and in rural or small private hospitals for training sites are among the factors accounting for this difference. Reasons cited for the success of the osteopathic primary care model include required family practice clerkship rotations during clinical years and about 75 percent of the year spent in primary care experience. Recommendations include altering physician reimbursements to emphasize cognitive skills over procedural, allowing a higher reimbursement differential through the direct reimbursement mechanism in favor of primary care trainees (to include osteopathic interns), allowing bonus reimbursement to institutions with a fixed percent of trainees in primary care (through the indirect payment adjustment), and developing COGME recommendations that consider osteopathic and allopathic manpower supplies separately. Discussion included debt burdens, tuitions, and allopathic residencies for osteopathic students.

18. Dr. Aaron Shirley, National Association of Community Health Centers, noted that the Association represents over 580 community and migrant health centers, including 1,500 clinic sites and over 3,000 physicians that provide primary care services to the nation's 6 million poorest citizens. He traced his own experience in obtaining a medical degree, completing a pediatric residency, and deciding to pursue his career in Mississippi, where the need for black physicians was overwhelming. Since 1966, the number of federally funded community health centers in Mississippi has increased from 1 to 21, and the number of black physicians from 47 to 130, at least 90 percent as a direct result of various medical manpower development programs. He called the continuation of such programs crucial to the health care needs of Mississippi's and America's poor and minority citizens. Discussion topics with Council members included incentives and disincentives for graduates to stay in poor rural areas; targeted recruitment of providers; and the Health Careers Opportunity Program.

19. Dr. John S. Davis, Director of Medical Education at the Mary Imogene Bassett Hospital in Cooperstown, NY, presented an overview of the way a regional academic medical center works to upgrade rural health problems; it builds a network of community health centers with physicians and mid-level providers; it provides access to care; and it offers a leadership role for regional health care. Using his own hospital as a model, he demonstrated the programs, benefits, and problems of a rural academic medical center. He recommended that direct and indirect educational support of GME be modified to consider the economic realities of small rural teaching hospitals. Discussion followed on quality of care in a rural setting, altering federal formulas for direct and indirect support for rural hospitals, and mid-level providers.

20. Dr. Frank Riddick, representing the American Medical Association, commended the Council in his oral testimony for using caution and restraint concerning the financing of GME and urged their consideration of AMA's principles on the subject. (1) Since GME benefits the health and well-being of the American people, societal contributions are appropriate. (2) Since the education of physicians and the clinical care of patients are inextricably linked, no attempt should be made to factor out the time spent on each. (3) Patient care revenues, derived from both public and private payers, should continue to be used as the predominant source of funding of GME. (4) Funding should also continue to be derived from State funds, the Veterans Administration, Federal, State and private grants, institutional gifts, and endowment income. (5) Teaching hospitals should be reimbursed fully for their reasonable costs of residents' salaries, fringe benefits, and faculty instruction of residents. (6) Medicare indirect medical education adjustment should be continued at an adequate level. (7) Support for direct and indirect medical education costs must include residents assigned to ambulatory sites. (8) Billing for services by residents should not be encouraged or fostered. (9) Direct federal financial assistance for primary care

residency programs in the areas of family medicine, general internal medicine, and general pediatrics should be continued. (10) Residency training (without guarantees of specialty and location) should be available to every graduate of a U.S. medical school. (11) Residents should receive reasonable compensation in all training programs. Discussion followed on the greater financial burden for GME being borne by those who use teaching hospitals; the meaning of reasonable direct cost reimbursements to teaching hospitals; AMA's request for another public hearing; AMA's findings on manpower supply.

21. Dr. David Benford, Vice President of the Medical Society of the State of NY, presented an evaluation which criticized the work of the Commission on Graduate Medical Education established in 1984 by the New York State Commissioner of Health. Known as the Gellhorn Commission, its members were charged with making recommendations on all aspects of GME for the State. In February 1986, the Commission completed its work and published its report. The Medical Society of the State of NY in reply to the Commission's recommendations, issued a minority report. Dr. Benford's testimony was a critique of the Commission's report, finding most objectionable the centralization of authority for the administration of GME programs in the State Department of Health and the State Department of Education. Dr. Benford called his testimony an attempt to point out the flaws inherent in both the concept of individual State regulation of graduate medical education, as well as the specific problems with the approach advocated for New York State by the Department of Health. He urged any changes in the system of GME to be considered in the context of a national approach to the issue.

22. Dr. Thomas Mou, President of the Educational Commission for Foreign Medical Graduates (ECFMG), and Dr. Jerry Dillion, senior psychometrician, National Board of Medical Examiners (NBME), provided joint testimony to the Council. Dr. Mou presented background on the National Board, established in 1915 to provide a national licensure exam; the NBME, a three-part exam available only to graduates of U.S. and Canadian accredited schools; and the FLEX exam, which may be taken by U.S. and FMGs for U.S. medical licensure. To meet medical exam requirements, FMGs must pass the 2-day Foreign Medical Graduates Examination in the Medical Sciences (FMGEMS), which is the entree point for a residency program (but not for licensure). Successful scores enable FMGs to meet the medical science requirement for ECFMG certification and to obtain a visa to enter the country under PL 94-484. Dr. Diolon described the procedures used to construct FMGEMS, the steps taken to assure comparability to the National Boards, Part 1 and Part 2, and the evaluation by two experts in educational measurement and psychometrics.

23. Dr. H. William Harris, representing American Bureau for Medical Advancement in China (ABMAC), described a major effort directed by ABMAC to assist young physicians, nurses, medical scientists, public health workers, and other health-related professionals in Taiwan to

obtain appointments for appropriate postgraduate training in U.S. academic centers. Because the experience might offer insights into the policy issues surrounding FMGs, Dr. Harris outlined for the Council the essential components of the successful programs: (1) Candidates are nominated by responsible officials and staff of a Taiwan sponsoring institution. (2) The candidate and sponsoring institution must define in writing specific goals sought by the experience in the U.S. (3) The sponsoring institution must assume total responsibility for the salary and travel expense of the trainee. (4) The candidate must be interviewed by an ABMAC officer in Taiwan to ensure serious purpose, commitment to learning, and adequate English skills. (5) The candidate must have a guaranteed appropriate salaried post on completion of training and must sign a contract agreeing to return to Taiwan and occupy that post. Dr. Harris suggested that the U.S. might benefit in educating FMGs by having a council and placement service to match the skills needed in countries sending training candidates here. A brief discussion followed on the subject of charging tuition for foreign nationals.

24. Dr. Maria L. Garcia, Interamerican College of Physicians and Surgeons (ICPS), and speaking on behalf of ICPS's 25,000 Spanish-speaking physicians in the U.S. and Puerto Rico, proposed an alternative international medical education and service exchange program. Modifications would include a short-term preceptorship program, elimination of exam barriers for select accomplished clinicians to participate in U.S. GME, and the formation of an international health service corps. ICPS' position was summarized as follows: (1) The current GME system in the U.S. should continue to be used for postgraduate education of exchange visitor physicians. (2) Exchange visitor physician training should not be confined to medical school affiliated programs but should include private organizations and structured preceptorship experiences. (3) The U.S. should consider the organization of an international health service corps, composed mainly of U.S. trained exchange visitor physicians. (4) Clinical screening exams should be accepted as tests of clinical competence. (5) The U.S. Government should finance exchange programs for practicing physicians from foreign countries to study in the U.S. since these programs are an arm of U.S. foreign policy. In the discussion that followed, Dr. Garcia clarified that testing of exchange physicians should not be done by the FMGEMS but by a clinical exam. Other topics discussed were the U.S. accreditation of foreign medical schools, funding of FMGs in GME by the State Department, and an international health service corps.

25. Ms. Miriam Jacobs, representing the Action Committee for Foreign Medical Graduates (ACEMG), addressed several of the Council's draft conclusions/recommendations concerning FMGs and expressed the following views of the ACFMG: Issue No.1-agreement with conclusion 1.1 not to exclude FMGs from residency training programs; Recommendation a.A.a of first draft--disagreement with a 90 percent quota of LCME-or AOA/approved graduates in training programs;

Conclusion 3-2.4-agreement that only most highly qualified residents be accepted, irrespective of citizenship or nationality. She recommended funding of programs approved by residency review committees, regardless of the nationality of the residents; Issue No. 2, Conclusion 2.1--agreement that individual qualification, not medical school affiliation, should be the criteria for entry; Recommendation A.2.A and B.2.B-agreement that U.S. citizens should have priority over foreign nationals who intend to immigrate to the U.S.; Issue No. 4--agreement that there be one examination for everyone, regardless of where the medical education was received; Recommendation 4.A--agreement that the Federal government should not add further requirements for FMGs; Issue No. 5--opinion that the question of accrediting medical education outside the U.S. be left to the discretion of the States. In summary, the ACFMG feels that the imposition of control into GME is unwarranted, unwise, and without a rational basis. In the discussion, Dr. Whitcomb clarified the point that quotas were not part of the Council's recommendations. Ms. Jacobs expressed impatience at an alleged lack of cooperation of the ECFMG in furnishing its comparability study on exams for FMGs.

26. Kevin P. Donovan, Esq., North American Students Association (NASA) of the Autonomous University of Guadalajara (UAG), an attorney representing U.S. medical students at the UAG, expressed approval of the Council's principles and the Subcommittees'conclusions/recommendations, especially those advanced by the FMG Subcommittee. NASA believes strongly that one test should be used for all candidates for U.S. residency programs. Use of the NBME for U.S. graduates and the FMGEMS for FMGs is discriminating, and, if the tests are equivalent, as the NBME claims, why have two tests at all? Further, Mr. Donovan suggested that the tests are not equivalent in their level of difficulty, claiming that the FMGEMS is more difficult and more obtuse. Discussion followed concerning the reasons for and the equivalence of the two tests. Mr. Donovan described the lengthy process of litigation that could be involved over the equivalence issue.

27. Richard Richards, legislative counsel for the Autonomous University of Guadalajara (UAG), expressed approval of the proposed COGME principles recommended by the FMG Subcommittee and anticipation of indepth discussion of those principles. He specifically expressed support by the UAG for the Subcommittee resolution on Issue No. 2, that there should be no distinction between graduates of U.S. and foreign medical schools simply on the basis of the school attended and Issue No. 3, that any clinical test required for entrance to graduate medical education be applied to all applicants, regardless of the geographical source of their education. A description of the UAG followed: UAG is a co-educational, non-religious, non-profit university, the oldest and largest (private) in Mexico. The university trains, among other professions, attorneys, engineers, architects, psychologists, educators, public administrators, linguists, and physicians. There are 20,000 students and 1,500

faculty members, and 38,000 students have graduated since its founding in 1935, 7,500 of whom have been American citizens. The school approved in all States requiring preapproval inspections for clinical clerkships. The UAG has worked with the Congress to preserve Medicare reimbursement to teaching hospitals for FMG residencies and to protect guaranteed student loans to FMGs attending foreign medical schools. Other discussion related to the nationality of students, transfer credits, residency requirements, and the need for single, rather than equivalent, testing for FMGs.

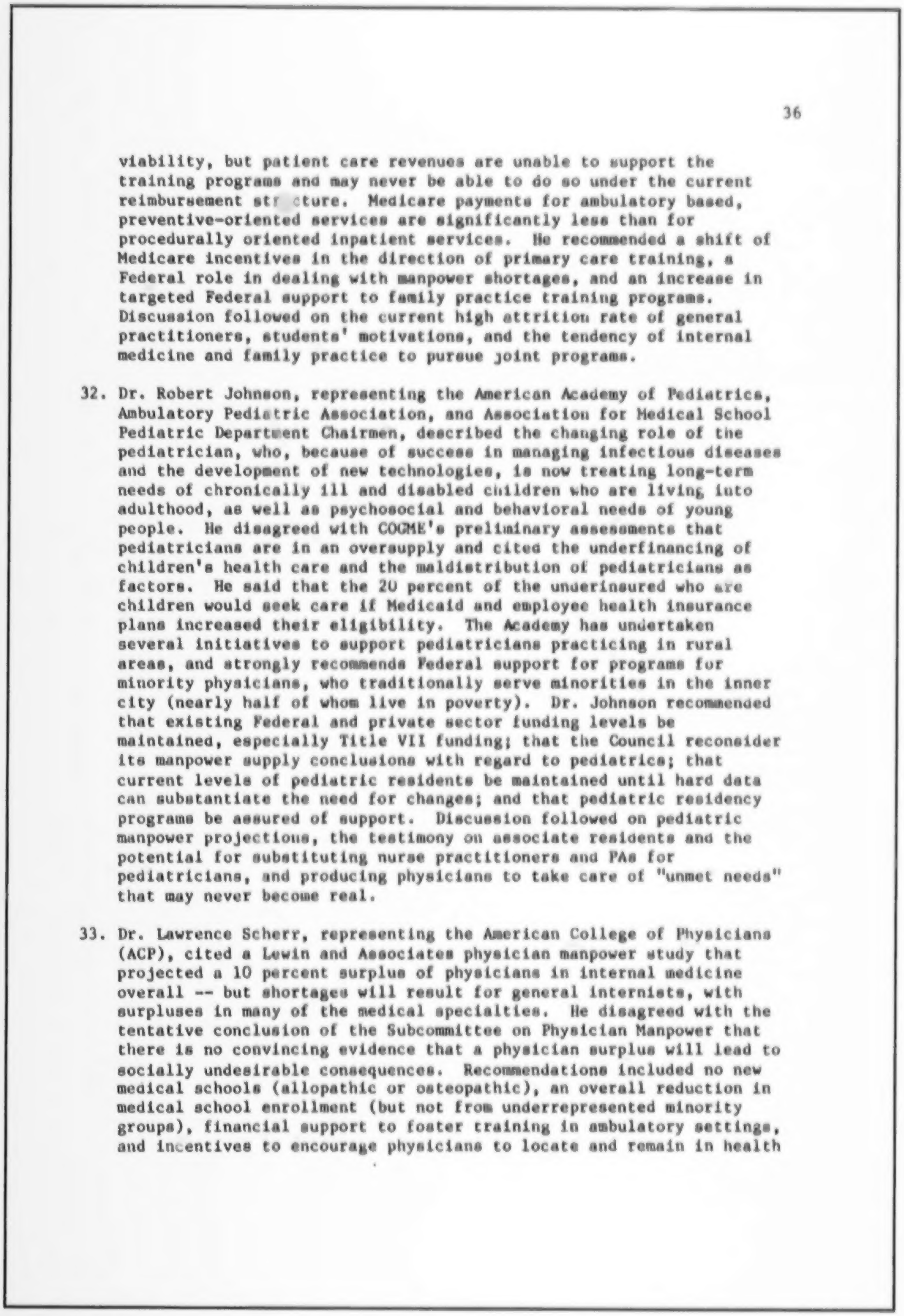
28. Dr. James Cassidy, President of Ross University, which has a school of medicine chartered in Dominica, expressed general support for the conclusions of the Council and its Subcommittees. He raised questions, however, on why the FMG Subcommittee chose as its first order of business to consider the effect on the availability of hospital-based services if FMGs were to be removed from hospital training. Reasons he cited for not removing the FMGs included the economy and importance of providing health care to large groups of indigent people and the absence of funds for replacement of FMG residents. He expressed concern for equitable treatment of all American citizens, wherever they had received their medical education. He cited wide variances in program requirements of LCME schools as evidence that each school has its own process and, therefore, it is the product of education, not the process, that should be considered. He strongly supported the recommendation that one examination be used for all applicants for entrance into GME, and the recommendation of the Physician Manpower Subcommittee that the Federal government not attempt to influence physician manpower supply in the aggregate. Dr. Cassidy replied to questions about his school of medicine concerning enrollment, applicants, and its teaching hospital.

29. Dr. Charles R. Modica, J.D., Chancellor of St. George's University School of Medicine (Grenada) cited examples of the high quality of medical education being provided at his University. He called attention to the high pass rate of graduates on the U.S. qualifying examination, the fact that one-third complete their education in U.S. medical schools, St. George's approval by both New York State and New Jersey for clerkship programs, and recognition by the Congress (during the Higher Education Act Authorization) of St. George's significant contribution to the education of U.S. citizens. Because of its comparatively high pass rate on the ECFMG exam, St. George's is the only Caribbean institution that qualifies for guaranteed student loans under the new criteria of The Higher Education Act. Dr. Modica said he outlined these characteristics to show that they are filling a manpower need not currently being filled by available domestically trained medical graduates and that by allowing foreign graduates to fill the residency positions of inner city hospitals, we are allowing the law of supply and demand to take over. Dr. Modica asserted that the FMGEMS exam is radically different from the National Board exam and offered to conduct a scientific comparison, at the expense of St. George's, on the comparability of the two

examinations. He expressed general approval of the conclusions/recommendations of the Council on GME, but cautioned against reducing GME financial support for FMGs in view of health care delivery needs and respective costs for alternatives. Discussion followed on St. George's nationality of students, its teaching hospital, transfer students, hospital sites for clinical training, and the recent reduction by half of applicants and enrollment.

30. Dr. William F. Donaldson, Chairperson of the Health Manpower Steering Committee, Council of Medical Specialty Societies (CMSS), expressed support for the general principles of the Council concerning the health of the American people. He said decisions on the variation in the length of residencies for individual specialties belong to the scholars in the respective fields. CMSS recognizes an obligation to alien graduates of foreign medical schools who would benefit from training in the U.S. and return to their native land, and they support efforts, to increase opportunities for minorities in the health care field. Regarding the positive or negative effects of a surplus or shortage of physicians, Dr. Donaldson said to include in any analysis the possibility of the development of new technology, new modes of treatment, and new diseases, such as AIDS. He described resident tracking development by many of the societies of CMSS to keep pace with changing manpower levels. The American College of Surgeons, for example, reported that the peak of general surgical residents was reached in 1983-1984 with 13,000 enrolled, but there has been a 3.1 percent decline since then. FMG residents in surgery have decreased by 48.6 percent since 1982-1983. Dr. Donaldson told the Council that tracking residents through their GME and into practice would be essential to their work and offered the assistance of CMSS. Discussion followed on payments to FMGs for residency training, manpower projections of Graduate Medical Education National Advisory Committee (GMENAC), and tracking by additional CMSS societies.

31. Dr. George Dean, representing the American Academy of Family Physicians (AAFP), described family practice as the premier, primary care specialty in the U.S., providing comprehensive, continuing care to all members of the family -- care that is ambulatory based, cost-effective, and preventive-oriented. The supply of family physicians is unable to keep pace with the demand. Already, they treat significant populations of geriatric and pediatric patients. With the tremendous expansion of the managed care industry and increased emphasis on cost-effectiveness, family practice residency trained graduates are at a premium. Family physicians meet manpower needs where the shortages are most critical -- 47 percent locate their practices in rural and suburban communities of less than 25,000 and can treat 85 percent of the problems. The AAFP is making a significant effort to increase family practice residency affiliations with community health centers, migrant health centers, and free clinics. Federal support, though less for family practice than for other training programs, remains an important source of financial



viability, but patient care revenues are unable to support the training programs and may never be able to do so under the current reimbursement structure. Medicare payments for ambulatory based, preventive-oriented services are significantly less than for procedurally oriented inpatient services. He recommended a shift of Medicare incentives in the direction of primary care training, a Federal role in dealing with manpower shortages, and an increase in targeted Federal support to family practice training programs. Discussion followed on the current high attrition rate of general practitioners, students' motivations, and the tendency of internal medicine and family practice to pursue joint programs.

32. Dr. Robert Johnson, representing the American Academy of Pediatrics, Ambulatory Pediatric Association, and Association for Medical School Pediatric Department Chairmen, described the changing role of the pediatrician, who, because of success in managing infectious diseases and the development of new technologies, is now treating long-term needs of chronically ill and disabled children who are living into adulthood, as well as psychosocial and behavioral needs of young people. He disagreed with COGME's preliminary assessments that pediatricians are in an oversupply and cited the underfinancing of children's health care and the maldistribution of pediatricians as factors. He said that the 20 percent of the underinsured who are children would seek care if Medicaid and employee health insurance plans increased their eligibility. The Academy has undertaken several initiatives to support pediatricians practicing in rural areas, and strongly recommends Federal support for programs for minority physicians, who traditionally serve minorities in the inner city (nearly half of whom live in poverty). Dr. Johnson recommended that existing Federal and private sector funding levels be maintained, especially Title VII funding; that the Council reconsider its manpower supply conclusions with regard to pediatrics; that current levels of pediatric residents be maintained until hard data can substantiate the need for changes; and that pediatric residency programs be assured of support. Discussion followed on pediatric manpower projections, the testimony on associate residents and the potential for substituting nurse practitioners and PAs for pediatricians, and producing physicians to take care of "unmet needs" that may never become real.

33. Dr. Lawrence Scherr, representing the American College of Physicians (ACP), cited a Lewin and Associates physician manpower study that projected a 10 percent surplus of physicians in internal medicine overall -- but shortages will result for general internists, with surpluses in many of the medical specialties. He disagreed with the tentative conclusion of the Subcommittee on Physician Manpower that there is no convincing evidence that a physician surplus will lead to socially undesirable consequences. Recommendations included no new medical schools (allopathic or osteopathic), an overall reduction in medical school enrollment (but not from underrepresented minority groups), financial support to foster training in ambulatory settings, and incentives to encourage physicians to locate and remain in health

manpower shortage areas. On the FMG issue, Dr. Scherr said, in an era of fiscal constraint and an abundance of physicians, it is difficult to justify public funds for undergraduate medical education at foreign medical schools or U.S. residency training for graduates of such unaccredited schools. The ACP favors a phased elimination of support for these individuals. He called for the Federal government to be involved in collecting data for projecting physician manpower needs. Discussion followed on the consequences of an oversupply of physicians, overall decreases in medical school enrollments, Federal funding of data bases, incentives for GME in the ambulatory setting, and funding to match health manpower needs.

34. Dr. George L. Jordan, Jr., representing the American College of Surgeons, stated that GME is a necessity to maintain the high level of care in the U.S. and cautioned against broad changes in financing policies that might jeopardize that status. The surgical leadership of the U.S. requires that we demonstrate our concern for countries who have fewer resources by providing education and training for international scholars who will return to their countries to become medical and surgical educators. He presented the following views on GME: (1) Decreasing financial support for residency training would hinder access of minorities and economically disadvantaged students for GME. (2) Care must be taken in making aggregate changes that might be detrimental to special areas of training, e.g., pediatric surgery, which graduates only a few physicians each year. (3) The projections of GMENAC are grossly oversimplified and a more specific data-base needs to be established. (4) Social changes affecting manpower (e.g., women physicians and their practice arrangements, non-physician providers, alternate delivery systems, FMGs, the aging population) necessitate a total reevaluation of the manpower problem. He urged the Council to maintain a high level of commitment to protect the quality of training of U.S. physicians. Discussion followed concerning the length of surgical residency, increased funding for primary care residents, and supply of surgeons.

35. Dr. Fred Featherstone, Deputy Executive Director, American Academy of Orthopedic Surgeons, complimented the Council on the open manner in which it approached its task and urged members to keep the principles established visible as they continue their work for the next 10 years. He called the Nation's structure of undergraduate and graduate medical education "a treasure" that is still evolving. He expressed support for principle number five that urges the use of the private sector in deliberations and implementation. Changes taking place in both GME and the practice of medicine include a decline in medical school applications; shifts of interest from areas perceived as oversupplied or overly competitive into areas less attractive to U.S. medical graduates; emerging forms of managed care systems; and changing entry points into the medical system by an increasingly educated population. He commented that the content and length of training should be determined by the ABMS and ACGME. Dr. Featherstone discussed several unique characteristics of the orthopedic specialty: It includes primary, secondary, and tertiary

care in ways that few other specialties do; it treats children, active adults and the aged; it blends surgical skills with medical management of musculo-skeletal conditions in approximately equal proportions. Orthopedics has undergone immense changes in the last 20 to 30 years with advances in the management of degenerative joint diseases, joint replacement, arthroscopic diagnosis and surgery, and advances in spine surgery. Discussion focused on length of training, orthopedic services in rural areas, and underfunding in ambulatory and primary care specialties.

36. Dr. Carolyn Robinowitz, representing the American Psychiatric Association, first reviewed positive changes in psychiatry in the past two decades: a plethora of scientific advances, including specific treatments, better diagnosis, and more empirical applications that have changed outcomes, made it more efficacious and more cost-effective than other medical treatments; a steady increase in the numbers and the quality of the U.S. psychiatry residents; and a decrease in the stigma attached to psychiatric disorders and illnesses. On the negative side, Dr. Robinowitz said there is a critical shortage of psychiatrists because of the underfinancing of psychiatric care. It is the most poorly reimbursed specialty, and psychiatrists are among the lowest paid, in part because so many graduates work in salaried positions in the public sector. Few want to treat the most seriously ill patients--those with schizophrenia, major affective disorders, the 15 to 20 percent of the U.S. population who require major psychiatric intervention, substance abusers. Positions are vacant in spite of graduating increased numbers of residents. The needs are greatest at this time in child and geriatric psychiatry, but the needs are not being met. The major problem is financing partly because residency programs cannot be financed through clinical practice income, which is so minimal compared to the technologically oriented specialties. She urged the Council to prevent further disincentives to entering psychiatry. Discussion followed on complimentary mental health disciplines and payment for psychiatric care.

37. Dr. Jerry M. Weiner, representing the American Academy of Child and Adolescent Psychiatry,. described child and adolescent psychiatry as a subspecialty of general psychiatry with 4,000 practitioners. He said GMENAC estimates (with all its shortcomings) identified it as the specialty with the greatest shortage and projected it to remain in greatest shortage in all of medicine. There are an estimated 10 million plus children and adolescents with disorders requiring the services, but only 4,000 specialists to provide them. Care of children and adolescents with serious disorders tends to be more labor intensive, more time intensive, largely underfunded and, to a degree, stigmatized in reimbursement plans. The field has experienced a revolution in its theoretical and scientific database in the last 15 to 20 years and is committed to increased quality of training. It requires a total of 5 years of training after

completion of medical school. The problems dealt with include risk-taking behavior, attention deficit disorder, adolescent suicide, conduct disorders, substance abuse, and sexual abuse. Discussion followed on the length of training, difficulty in obtaining insurance coverage, makeup of hospitalized patients, and tracking of graduates.

38. Dr. Jacek Franaszek, representing the American College of Emergency Physicians, presented a brief historical background on the relatively new specialty of emergency medicine. The first residency training program was developed in 1970 and evolved in response to the public demand for more adequate treatment in emergency departments. Today, there are 73 programs graduating over 430 residents per year. Emergency medicine is faced with a severe shortage that will persist well into the next century. The estimated current demand is for 14,000 (excluding the military); there are only 5,840 board-certified emergency physicians to meet this demand. Because of the current contemplated reduction of Federal funding for GME and an insufficient number of appropriately trained faculty, the number of training programs and positions will not grow, without additional support. Since emergency rooms are frequently a point of entry to the health care system for many that otherwise would not have access to it, the demand is ever-increasing. The college urged the Council to request national resources to be refocused on creating appropriate training slots to meet the shortage and to recommend that there be a sufficient number of qualified faculty to train emergency physicians. Discussion followed on the percentage of emergency room (e.r.) visits that are true emergencies, the effect of managed care in reducing e.r. visits, shorter practice lifetimes of e.r. physicians due to stress, and incentive for trainees.

39. Dr. Terrence Collins, representing the American College of Preventive Medicine (ACPM), presented background on the unique specialty, preventive medicine. It is unique because it focuses on groups of people and on health rather than disease. The field encompasses general preventive medicine, public health, occupational medicine, and aerospace medicine. The core disciplines are epidemiology, biostatistics, occupational environmental medicine, behavioral medicine, health administration, and clinical preventive medicine. Specialists are uniquely prepared to play key roles in providing medical care for the indigent in program development, evaluation, and in the direct provision of care. Despite an estimated 25 percent shortage of specialists, there has been no increase in the number of training programs since 1981, and the number of qualified applicants is about four times the number of training positions available. The major reason is a lack of stipends to pay residents. The preventive medicine programs are not hospital-based and funding has to be obtained from a variety of sources, e.g., foundations, industry, military, research grants, institutions housing the programs, and State and Federal sources. The ACPM strongly recommends increased Federal and State support for all preventive medicine training, with the first priority for resident stipends. Discussion followed on appropriate sources of funding.

40. Dr. Michael Parkinson, representing the Association of Preventive Medicine Residents, reported that both the 1980 GMENAC study and the 1980 Health and Human Services report projected a severe shortage of preventive medicine physicians. The major obstacles students face in entering the field are the lack of role model exposure in medical school since many residencies are affiliated with local or State health departments or schools of public health; the lack of encouragement in medical school for a preventive medicine career; and, most important, the considerable economic uncertainty and hardship resulting from limited and often unreliable funding sources. Dr. Parkinson described the preventive medicine specialists as a group prepared to deal with growing public concern for environmental and occupational risks and expanding legislative and regulatory mandate at a time when financial resources for health care are diminishing. Preventive medicine provides a systematic, integrated, and practical approach to the increasingly important disciplines of epidemiology, risk assessment, and clinical preventive medicine. Residents are trained in a multitude of public health disciplines, e.g., disease surveillance, health education planning, compliance with regulations on toxic exposures, and community behavior modification to reduce risk factors. Brief discussion followed on financial support for residents in preventive medicine.

41. Dr. Samuel Fox, representing the American College of Cardiology, announced the forthcoming availability (April 1988) of a new report on manpower in cardiology, the Bethesda Conference Report. The objectives of the conference, held in October 1987, were: (1) to assess the roles of cardiovascular specialists; (2) to give guidance to the community regarding quality of care; (3) to develop a posture to react effectively to changing needs; and (4) to develop an information base for long-term actions. When available, copies will be provided to the Council for use in assessing the Nation's physician manpower needs. Discussion followed on assessments of adequacy of cardiology supply and recent Journal of American Medical Association articles on supposed unneccessary procedures in cardiology.

42. Dr. Michael Mogadam, American College of Gastroenterology (ACG), presented the following views of the ACG: (1) There is no alternative to GME for all graduating students and no distinction should be made between American or foreign medical graduates. Once U.S. citizens are accredited, it would be difficult to exclude them from GME without the specter of discrimination. Of the non-U.S. FMGs, many provide care to our indigents, underprivileged and older citizens, and they work full time in city, county, and VA hospitals and clinics. (2) Although some projections suggest an oversupply of physicians in various fields, these may not be quite accurate. Trends in a number of specialties have shown a variance from projections of GMENAC. For example, from 1985 to 1987, there was a dramatic 13 percent reduction in the number of students choosing internal medicine. Also, with the population of the country growing older, in 10 years there will be more than 35 million over the age of

65 and nearly 50 million over the age of 55, the primary population served by gastroenterology and the rest of the subspecialties of internal medicine. Subspecialities should undertake manpower studies, as the ACG has already begun to do. Any change in the aggregate supply or the mix of physicians should be delegated to organizations such as the FCIM or the ACGME. (3) The ACG supports the recommendations of the AAMC that teaching hospital revenues from patient care payers should continue to be the principal source of support for GME. ACG also supports a 6-year limitation of support rather than 5. Discussion followed on the use of Medicare funds for FMGs, wide variations in costs per resident, and the feasibility of pilot programs on financing GME.

EXHIBIT C

INDIVIDUAL WRITTEN TESTIMONY SUMMARIES

The following narratives present highlights of written testimonies received from those organizations that were not present at the November 19-20 Hearing:

1. The Alliance of Foreign Medical Graduates provided testimony noting that FMGs have served the United States well. The organization supported national legislation to eliminate discrimination against FMGs and other proposals to eliminate a "2 tier system." The testimony argues against replacing FMGs with physician assistants. Also, a proposal is presented to link the offer of training to FMGs with obligation to serve in U.S. shortage areas.

2. The American Academy of Physical Medicine and Rehabilitation provided testimony reviewing the goal of this specialty and describing roles performed by physiatrist in several settings. The heavy geriatric component of their patient population was highlighted, as well as the conditions seen most frequently. Citing a major shortage of practitioners in this specialty, the Academy recommended that financial incentives for the training of physical medicine and rehabilitation residents through Medicare be provided and grant support for residency training be expanded.

3. The American Association of Neurological Surgeons (AANS) and the Congress of Neurological Surgeons provided testimony regarding neurosurgical manpower, noting their regular participation in State, regional, and national studies of manpower over the past two decades. Commenting about the difficulty in accurately forecasting future needs of neurosurgeons, the testimony called attention to the AANS Manpower Study presently under development which will look at the economic nature of the practice of most neurosurgeons in the country, including the developing practice, the established practice, and the practice in the throes of termination. The proper density and distribution of neurosurgeons will not be determined by a study but

by an ongoing analysis balancing realistic appraisals of technological advances with public demand. The debate on GME financing should focus more on the value to beneficiaries of residency services, and less on some arbitrarily defined scheme of price support. Federal policy should support these conclusions.

4. The American College of Obstetricians and Gynecologists provided testimony emphasizing the impossibility of quantifying the aggregate supply of and (especially) the demand for physicians, citing the increased cost of liability insurance and its impact on obstetric manpower as an excellent example of a key variable affecting the current status of manpower (and difficult to anticipate in earlier projections). Current trends exacerbate the problem of access to maternity care, particularly in rural and underserved areas. Caution was urged in adopting any new policy that would have a dramatic effect on physician supply, noting concurrence with the view that "there is no convincing evidence to suggest that the projected over supply of physicians will necessarily lead to socially undesirable consequences." COGME was urged to include obstetrics and gynecology in the context of its discussions of primary care. Testimony was also provided in support of increased minorities in medicine, evolutionary rather than precipitous changes to GME financing, and a loan repayment program with a period of obligated service.

5. The American Society of Clinical Oncology provided testimony addressing the problems of manpower supply in this subspecialty. As noted in the testimony, because of an adequate supply of oncologists in clinical practice but a deficiency of academic oncologists, a reduction in training programs should emphasize those programs that lack research opportunities. An ongoing assessment is needed to avoid overproduction of practitioners in this field. The testimony includes guidelines recommended for training programs.

6. The American Society of Hospital Pharmacists (ASHP) provided Council members with information regarding pharmacy residencies and their contribution to the health care delivery system. A recent survey of ASHP's pharmacy program showed that 62 percent of these institutions would be forced to limit or eliminate their pharmacy residency programs if Medicare funding were terminated. ASHP urged COGME to consider the value of pharmacy residency programs as it finalizes recommendations regarding the scope and funding of GME.

7. The Association of Program Directors in Surgery provided testimony in support of the concept that graduate education in surgery requires a minimum period of 5 years following completion of medical school. The Association urged COGME not to support any reductions in this amount of time.

8. The Howard University Hospital and College of Medicine, located in Washington, D.C., provided testimony indicating the importance of increasing minority representation in medicine and cited factors in

current policies and trends that had the potential for adversely affecting futurest rides in minority representation. Particular attention was directed to the role of minority physicians regarding the AIDS epidemic and in addressing over time the needs of the geriatric population. Barriers created by increasing costs of medical education were also highlighted. General recommendations covered restructuring malpractice insurance statutes; adopting a loan forgiveness program with an obligation to work in underserved areas; making available start up assistance for new practices; and fostering programs to encourage all qualified minority students to enter medical school. With regard to the latter, the testimony included an extensive series of recommendations targeted to the pre-college, undergraduate education, and medical school levels.

9. The Independent Association of Physician Alumni of the Autonomous University of Guadalajara provided testimony complimenting the Council on its balanced, open attention to issues. Views were expressed stressing the many contributions to medicine in the U.S. made by FMGs, including the provision of culturally sensitive care to many non-English speaking citizens and respective contributions to faculty appointments and research. The suggestion was advanced that available data calls more attention to questionable quality of U.S. educated physicians than of foreign trained physicians. The Association noted that unless changes were made to COGME's tentative conclusions and recommendations the Association stood ready to endorse the Council's present report.

10. The Parents League of American Students of Medicine Abroad (P.L.A.S.M.A.) provided testimony commenting that FMGs must have equal opportunity for access to graduate medical training in the U.S. and that it is imperative that the same examination be used to satisfy admission requirements (to evaluate all applicants by the same standard). The view was expressed that FMG substitution by non-physicians would affect health care quality adversely and by full-time health professionals would result in higher costs. Also, U.S. citizens studying abroad should not be denied opportunities in U.S. training programs by alien FMGs. Separate programs should be set up for alien FMGs returning to their countries, with funds coming whenever possible from the countries of origin.

11. The San Juan Bautista School of Medicine in the Commonwealth of Puerto Rico provided testimony reviewing the objectives and characteristics of the institution established in 1979. The Council was advised that the school is currently seeking accreditation by the LCME and is in the process of implementing its recommendations. A visit by the LCME is scheduled for 1988. The testimony noted that assistance from the Federal government was needed for it to complete the LCME requirements. The school presented a request to COGME (similar to its petition to the Congress) for one time start-up funding of $1.3 million to improve its facilities and equipment, an area to which the LCME assigneed top priority.

12. The Society of Teachers of Family Medicine provided testimony calling for a need to expand family practice residency positions in view of the shortage of the discipline. Recommendations included enhancement of Title VII training grants, increased Medicare reimbursement for residency education in family practice in relationship to specialties in surplus, and incentives to States to initiate or expand their support for residency education in family practice. Incentives are needed to assist hospitals/institutions in expanding residency education in family medicine. The testimony urged COGME to investigate the impacts of the oversupply of physicians.

13. Mahendr S. Kochar, M.D., Associate Dean, Medical College of Wisconsin, provided testimony underscoring the excellence and many positive contributions of FMGs. Dr. Kochar commented that the ECFMG and FLEX examinations are sufficient to guarantee that only the best FMGs receive graduate training in the U.S., and argued that sound public policy is to keep the doors open.

14. B.F. Overholt, M.D., Gastrointestinal Associates, P.C., submitted testimony which included attention to the costs, challenge, and change for gastrointestinal endoscopy in the 1980s. His testimony included recommendations concerning endoscopic fees, emphasis on office endoscopy, program director choices, practice orientations, and other areas of direct relevance to the profession.

/s/ Neal A. Vanselow, M.D.

Neal A. Vanselow, M.D.
Chairperson
Council on Graduate Medical Education
December 1987

APPENDIX C

GLOSSARY OF KEY TERMS

Accreditation Council for Graduate Medical Education (ACGME):
The ACGME is an organization that sets the standards for residency training and voluntary accreditation of graduate medical education in the United States, by establishing general requirements and approving specific requirements for specialty residency training programs proposed by the residency review committees (RRCs). It is sponsored jointly by the American Board of Medical Specialties, the American Hospital Association, the American Medical Association, the Association of American Medical Colleges, and the Council of Medical Specialty Societies. (Maass and Wilbur, 1982)

Adjusted-Needs Based Model:
The model that GMENAC (see below) developed for estimating physician requirements for 1990 by specialty. The model incorporated needs-based components tempered by what the Committee considered to be "realistically achievable" by 1990.

Affiliation Relationships:
(1) The following are the three categories of relationship a teaching hospital has with a medical school, as defined in the AMA *Directory of Graduate Medical Education Programs:* (a) *major*—the hospital is an important part of the medical school's teaching program and clinical clerkship program; (b) *graduate*—it is used only for graduate training programs and meets such criteria as medical school participation in selecting residents, regularly scheduled participation of medical school faculty in the hospital teaching programs, etc.; and (c) *limited*—it is used to a limited extent, e.g., medical school faculty participate only in occasional lectures or consultations, used only for undergraduate medical education, etc.

(2) The COTH revises this for use in its annual surveys by distinguishing between university-owned and other major affiliates, and combining the remaining categories with unaffiliated hospitals into "limited."

Ambulatory Sites, Training, etc.:
Exclusionary definition, encompassing places where noninpatient care is provided and noninpatient training takes place. Includes clinics, both hospital-based (such as hospital outpatient clinics) and free-standing, as well as physician offices. Where as a rule the patient can walk in.

American Board of Medical Specialties (ABMS):
The primary function of the ABMS is to assist its members in the process of evaluating and certifying physician specialists. The membership of the ABMS consists of regular members (member boards) and associate members. There are 23 specialty boards which make up the regular members, including 21 primary boards, one conjoint board, and one conjoint board (modified). The associate members are five national organizations concerned with graduate medical education and medical and specialty practice. Twenty-four specialties are referred to rather than 23, because 2 specialties (psychiatry and neurology) share one board but have individual residency review committees (RRCs). However, several boards and RRCs are responsible for more than one specialty or subspecialty, resulting in a total of 31 specialties for which general certificates are awarded, and 50 subspecialties for which certificates of special qualifications or certificates of added qualifications are awarded. (American Board of Medical Specialties, 1987)

Cognitive and Procedural Services:
Generic terms. "Cognitive" refers to services involving application of physician skills of data gathering, analysis, case management, and judgment relating to prevention, diagnosis, and treatment of health problems; *not* fundamentally provision of a procedure. These services are frequently performed and identified as a "visit" for purposes of reimbursement. "Procedural" services are those which, while also involving analysis and judgment, primarily involve the performance of an action nearly always using equipment and reimbursed by individual procedure and separately from a "visit."

Council of Medical Specialty Societies (CMSS):
The CMSS was founded in 1965 as the Tri-College Council by the American College of Obstetricians and Gynecologists, the American College of Physicians, and the American College of Surgeons. CMSS adopted its current name in 1967, as other specialty societies joined. Today, all 24 major specialties with certifying boards sanctioned by the American Board of Medical Specialties are represented on the CMSS. The primary goals of the CMSS are said to be to foster excellence in the education of physicians, to improve the quality of medical care in the United States, and to provide a forum for the exchange of information on issues of mutual concern in specialized medicine. (Maass and Wilbur, 1982)

Council of Teaching Hospitals (COTH):
The COTH is a part of the governance structure of the Association of American Medical Colleges, along with the Council of Deans, the Council of Academic Societies, and the Organization of Student Representatives. It has 435 member hospitals and provides representation and services related to the special needs, concerns, and opportunities facing major teaching hospitals in the United States. Teaching hospital membership is limited to those hospitals which sponsor or significantly participate in at least four approved, active residency programs, at least two of which must be in the following specialty areas: internal medicine, surgery, obstetrics-gynecology, pediatrics,

family practice, or psychiatry (exceptions to the requirement of four residency programs can be provided in the case of specialty hospitals).

Demand:
An economic concept that has been used to measure requirements for physician manpower; a multivariate functional relationship between the quantities of medical services that the population desires to consume over a relevant time period at given levels of prices of goods and services, financial resources, size, and psychological wants of the population as reflected by consumer taste and preferences for (all) goods and services. To be distinguished from need, which has also been used to measure requirements. Among the more prominent models for estimating requirements for physician manpower using concepts of demand is the demand-utilization model maintained by the Bureau of Health Professions.

Diagnosis-Related Group (DRG):
A classification system used in the Medicare Prospective Payment System (PPS) to determine the amount a hospital receives for the hospitalization of a Medicare patient. This is done by assigning a reimbursement weight to each DRG to adjust the payment for each admission based on an average resource consumption for that DRG. The system groups diagnoses, age groups, and presence of complications or comorbidity into groups that are intended to be relatively homogeneous in resource consumption (this homogeneity is thought to be variable, especially for "medical" as opposed to "surgical" DRGs, and the DRGs are presently unable to take variations in severity of disease into account). To define the DRGs, the 12,000 diagnostic codes of the ICD-9-CM classification system were grouped into 23 major diagnostic categories, most defined by organ system, and then further subdivided into clusters of diagnoses, procedures, age and presence of complications/comorbidities. Hospitalized patients are assigned to one DRG according to precise "partitioning" rules; the presence of an operating room procedure takes precedence in partitioning into a DRG. The rules require DRG assignment to be based on the "principal diagnosis," defined as that condition which on review is determined to have been the reason for hospital admission. Thus, the principal diagnosis is not necessarily the most clinically important or the most resource-intensive diagnosis.

Direct Medical Education Costs:
A term originated for use in the Medicare Prospective Payment System (PPS); most payers do not specifically identify a separate category of such costs. As defined by Medicare, these are the allowable costs of approved medical education activities, which include approved clinical, hospital-based training programs for physicians, nurses, and certain allied health professionals, e.g., physical therapists. The allowable costs include the salaries and fringe benefits of interns and residents, teaching physicians' salaries, classroom costs, and the costs appropriately allocated to the medical education cost center, such as institutional overhead, medical records, etc. (It is not correct to describe the latter associated costs as "indirect" in this accounting method.)

Educational Commission for Foreign Medical Graduates' (ECFMG) Medicine Examination:
This examination was designed by ECFMG as a comprehensive test of the applicant's knowledge in the principal fields of medicine. Most of the questions were chosen from the clinical fields of internal medicine, surgery, obstetrics and gynecology, and pediatrics. One-fourth of the questions were chosen from the basic medical sciences of anatomy, behavioral science, biochemistry, microbiology, pathology, pharmacology, and physiology. The questions were selected by the ECFMG Test Committee from the large pool of examination questions maintained by the National Board of Medical Examiners (NBME). Every question used in the examination had been previously used in at least one examination of the NBME for at least 5,000 students or graduates of U.S. medical schools. It was a written examination which consisted of 420 multiple-choice questions taken at one sitting. This examination was replaced by the Foreign Medical Graduate Examination in the Medical Sciences (FMGEMS) in 1984.

Exchange Visitor (J visa):
An alien having a residence in a foreign country which he/she has no intention of abandoning, who is a *bona fide* student, scholar, trainee, teacher, professor, research assistant, specialist or leader in a field of specialized knowledge or skill, or other person of similar description, who is coming temporarily to the United States as a participant in an Exchange Visitor Program.

Faculty Practice Plan (FPP):
The principal mechanism for organizing, collecting, and disbursing faculty practice income, also known as a medical or clinical practice plan. These have been described by the Association of American Medical Colleges as "any regular system (in the environment of the academic medical center) for managing the financial and other aspects of medical practice for the clinical faculty," i.e., as a means by which medical schools have developed formal policies and procedures governing the manner in which faculty physicians provide services to patients, securing reimbursement, and utilizing the resulting funds. In the most recent report, only 12 of 99 reporting medical schools did not have a practice plan for their institution (Jolly and Smith, 1981). FPPs are important for providing institutional negotiation and control of the faculty's engagement and incentives to engage in practice as well as for collecting and disbursing faculty income. Distribution of plan income within medical schools, usually described only in general terms, is said to amount to transfers to parent institution/medical school/accounts for departmental support, direct physician compensation and fringe benefits, and other operating expenses.

Federation Licensing Examination (FLEX):
The Federation of State Medical Boards in cooperation with the National Board of Medical Examiners developed the FLEX Program. It consists of two complementary components: Component 1 evaluates measurable aspects of knowledge and understanding of basic and clinical science principles and mechanisms underlying disease and modes of therapy. Component 2 samples the cognitive and additional abilities required of a physician in assuming independent responsibility for the general delivery of health care to patients. The FLEX is used by all medical licensing jurisdictions in the United States as a qualifying examination for licensure.

Foreign Medical Graduate (FMG):
A physician who graduated from a medical school outside of the United States and, usually, Canada. U.S. citizens who go to medical school outside this country are classified as foreign medical graduates (sometimes distinguished as USFMGs), just as are foreign-born persons who are not trained in a medical school in this country. The term is occasionally defined as, and nearly synonymous with, any graduate of a school not accredited by the Liaison Committee on Medical Education.

Foreign Medical Graduate Examination in the Medical Sciences (FMGEMS):
An examination designed cooperatively by the Educational Commission for Foreign Medical Graduates (ECFMG) and the National Board of Medical Examiners (NBME) to assess knowledge in the basic medical and clinical sciences. FMGEMS is made up of approximately 950 test items in a multiple-choice format. All items in the examination are drawn from the pool of examination items owned by the NBME. Day 1 (applicant must have completed two years of medical school prior to sitting for this exam) of the examination covers the basic medical sciences, and Day 2 (applicant must be within 12 months of completion of the full didactic curriculum prior to sitting for exam) covers the clinical sciences. A scale score is reported for the total group of items in the basic medical sciences and the total group of items in the clinical sciences. To pass FMGEMS, a scale score of 75 must be achieved in the basic medical science component and also in the clinical science component. In 1984 the Secretary of Health and Human Services determined that this examination was equivalent to NBME Parts I and II for the purposes of Public Law 94-484. This examination replaced the former ECFMG medicine examination and the Visa Qualifying Examination in 1984.

Graduate Medical Education National Advisory Committee (GMENAC):
Chartered from 1976 through 1980. Carried out the only U.S. study of needs-based requirements by individual specialties. In its final report issued in 1980, the committee concluded that in 1990 there would be 70,000 more physicians than required to provide physician services, and 145,000 by 2000. An oversupply was projected for most specialties. In the area of primary care, however, the specialties of osteopathic general practice, family practice, general internal medicine, and general pediatrics (and its subspecialties) were projected to be in "near balance," defined as projected supply within 85 to 115 percent of projected requirements. Specialties for which requirements were projected to exceed supply included child and general psychiatry, physiatry, emergency medicine, and preventive medicine. It should be noted that subsequent to the GMENAC effort, its needs-based methodology was applied to six specialties that had not been completed by GMENAC. This application raised the requirements for those specialties and resulted in reducing GMENAC's projected oversupply from 70,000 to 63,000 physicians.

Graduate Medical Education (GME):
Medical education given after receipt of the M.D., D.O. or equivalent degree, including the education received as an intern, resident, or fellow. This use contrasts with that in general education where graduate education refers to graduate school education leading to a master's, doctoral, or equivalent degree (called undergraduate medical education in medicine). It is sometimes limited to education required for specialty board certification. Education at this level usually includes supervised practice, research, and some teaching, as well as didactic learning.

Health Education Assistance Loan (HEAL) Program:
This program was authorized under Section 727 of the Public Health Service Act in 1976 to insure loans provided by non-Federal lenders for students attending eligible health profession schools. It is a federally insured loan program for eligible students in schools of medicine, osteopathy, dentistry, veterinary medicine, optometry, podiatry, public health, pharmacy, chiropractic, or in programs in health administration, clinical psychology, or allied health.

Health Manpower Shortage Area (HMSA):
Defined as any of the following which the Secretary of Health and Human Services determines has a shortage of health manpower: (1) an urban or rural area (which need not conform to geographic boundaries of a political subdivision and which is a rational area for the delivery of health services), (2) a population group, or (3) a public or nonprofit private medical facility. The criteria for determining a shortage vary for each of the three areas listed above. A *geographic area* will be designated as having a shortage of primary medical care manpower if criteria are met for a rational delivery area for primary care services; there is a ratio of population to full-time-equivalent (FTE) primary care physician of at least 3,000 to 3,500:1; and primary medical care manpower in contiguous areas are overutilized, distant, or inaccessible. *Specific population groups* will be designated as having a shortage of primary medical care manpower if the area in which they reside is rational for the delivery of primary medical care services, access barriers prevent the population group from use of the area's primary medical care providers, and there is a ratio of population group to primary care physician of at least 3,000:1. *Facilities* which may be designated include Federal and State correctional institutions and youth detention facilities, and public or nonprofit private medical facilities.

Indirect Medical Education Costs:
As defined by Medicare, the additional operating (i.e., patient care) costs incurred by hospitals with graduate medical education programs. These costs are reimbursed as a percentage of the total DRG payment to the hospital (see Indirect Medical Education (IME)/Teaching Adjustment below), and are not to be confused with the concept of indirect costs as a percentage of educational costs alone. An example is the additional tests ordered by residents over and above those normally ordered by experienced physicians. It is not known precisely what part of these higher costs are due to teaching (more tests, more procedures, etc.) and what is due to other factors (the particular types of patients which a teaching hospital may attract), although it is clear that costs per case are higher in teaching hospitals even after other factors such as case mix are taken into account. Some additional costs appear to result from additional demands on other staff and higher staffing levels.

It has been shown that the process of graduate medical education results in more intensive treatment regimens.

Indirect Medical Education (IME)/Teaching Adjustment:
A lump-sum payment, distinct from the DRG base payment rate and based on a formula developed to determine an adjustment to the reimbursement limits for teaching hospitals for their indirect medical education costs, as defined above. The formula is designed to provide an allowance for the higher costs associated with teaching institutions and is derived from an analysis of the relationship of costs per case to the ratio of interns and residents to hospital beds.

Intern or Resident:
An individual who has graduated from allopathic or osteopathic medical school (in receipt of an M.D. or D.O. degree) and is in an approved medical residency program as required to become certified by an approved medical specialty board. Also includes graduates of programs in dentistry and podiatry who are in clinical training in a hospital.

Medically Underserved Area:
Defined as an urban or rural area designated by the Secretary of Health and Human Services as an area with a shortage of personal health services. The basis for identifying medically underserved areas is the index of medical underservice which is obtained by applying weights to data on the following indicators: (1) ratio of primary care physicians to population, (2) infant mortality rate, (3) percentage of the population which is age 65 or over, and (4) percentage of the population with family income below the poverty level.

Model:
A system of postulates, data, and inferences presented as a mathematical description of an entity or state of affairs. In physician manpower planning and analysis, models have been constructed, for example, to project supply of and estimate requirements for physician manpower. Models have also been developed to relate components of either physician supply or requirements (e.g., the number of residents in graduate medical education as a component of supply) to policy variables (e.g., resident stipends) used to simulate the effects of these policy variables in these components.

National Board of Medical Examiners' Examination Parts I, II, and III (NBME I, II, and III):
An examination designed to assess knowledge in the basic medical and clinical sciences. (The NBME is a private voluntary organization that draws upon medical faculty and administrators throughout the Nation to prepare the examination material through its 15 test committees.) Part I is a two-day written (multiple-choice) examination in the basic medical sciences, including questions on anatomy, behavioral sciences, biochemistry, microbiology, pathology, pharmacology, and physiology. Part II is also a two-day multiple-choice examination, covering the clinical sciences and including approximately the same number of questions in each of the following subjects: internal medicine, obstetrics and gynecology, pediatrics, preventive medicine and public health, psychiatry, and surgery, each with related subspecialties. Part III consists of three sections, the first of which is a multiple-choice examination covering therapy and management. A second multiple-choice section relates to the interpretation of clinical data presented primarily in graphic form such as pictures of patients, gross and microscopic lesions, electrocardiograms, roentgenograms, charts, and graphs. The third section, patient management problems, utilizes a programmed testing technique (answer by an exposure technique to uncover information or results of actions) designed to measure the examinee's clinical judgment in the management of patients. Access to these examinations is limited to students and graduates of U.S. and Canadian medical schools accredited by the Liaison Committee on Medical Education.

National Health Service Corps (NHSC) Program:
A Federal program created by the Congress in 1970 (P.L. 91-623) as a component of the U.S. Public Health Service. Its mission is to improve the delivery of health services in Health Manpower Shortage Areas by providing health professionals and other health resources. Currently more than 3,300 NHSC members are delivering primary care to over 2 million underserved people in 1,600 communities.

National Resident Matching Program (NRMP):
Originally the National Intern Matching Program and then the National Intern and Resident Matching Program, this was established in 1952 by U.S. medical schools and teaching hospitals to provide an orderly process for the matching of candidates for internships and residencies (usually those who have just graduated from medical school) with residency training positions. The process calls for rank ordering of preferences by both applicant candidates and the teaching institution, a match between the two using complex decision rules, and a uniform announcement date for the matching of residents to positions. It should be noted that this is a voluntary program and not all applicants match through this program. It became the NRMP in 1978, and the provision of data on graduate medical education was added to its functions.

Need:
That quantity of medical services which expert medical opinion believes necessary over a relevant time period for the population to remain or become healthy as permitted by existing medical knowledge. This concept has been used to determine requirements for physician manpower. It is to be distinguished from demand, also used to determine requirements.

Oversupply (Undersupply):
The amount by which the supply of physicians exceeds (is exceeded by) requirements.

Permanent Resident:
An alien who has been lawfully admitted to the United States for permanent residence. A permanent resident may apply for citizenship through naturalization, if he/she so chooses, after he/she has resided in the United States for five years (three years if he/she has been married to a U.S. citizen for three years).

Postgraduate Year (PGY):
Used to designate the academic year(s) of residency training for a medical graduate, e.g., PGY-1, PGY-2. The more

common usage of PGY-1, used in the body of this report, is to indicate the entry year of residency training following the receipt of the medical degree ("R-1" is then used to indicate the first year of training programs that require previous GME). A less common usage, preferred for statistical reporting and used in the Overview of Medical Education in Volume I of this report, uses the term "GY-1" to indicate the entry year of residency training where no previous GME is required. This convention uses "PGY-1" to indicate the first year of training in all specialties including those where prior residency training is required.

Physician Assistant:
An individual who is qualified by academic and clinical training to provide patient care services under the supervision of a doctor of medicine or osteopathy.

Primary Care:
Classically defined by Alpert and Charney (1973) as care which (1) is first-contact care, at the interface of the patient and the health care system; (2) assumes longitudinal responsibility for the patient regardless of the presence or absence of disease; and (3) serves as the "integrationist" of care for the patient. The Institute of Medicine has provided another key definition which spells out attributes of accessibility, comprehensiveness, coordination, continuity, and accountability (IOM, 1978). It should be noted that the Physician Payment Review Commission has recently recommended to Congress that Medicare-reimbursed fees for primary care services receive a greater percentage increase than other services. For purposes of this particular recommendation, primary care services were defined as office visits, house calls, nursing home visits, and emergency room care.

Primary Care Specialties:
The Bureau of Health Professions considers the primary care specialties to be family practice (general practice in osteopathic medicine), general internal medicine, and general pediatrics; legislative grant activities are restricted to these specialties. The American Medical Association adds obstetrics/gynecology as a primary care specialty. Many other specialties consider that their practitioners provide primary care to their regular patients. For the purpose of this report, family practice (general practice in osteopathic medicine), general internal medicine, and general pediatrics are defined as the primary care specialties.

Prospective Payment System (PPS):
The system enacted by Congress in 1983 and implemented beginning October 1983 which reimburses acute-care general hospitals on a per-admission basis. The amount of payment is weighted according to the diagnosis-related group (DRG) for the admission and is further adjusted as described below. The PPS was phased in from a 25 percent regional Federal rate/75 percent hospital-specific rate initially to a 100 percent national Federal rate at the present time. In general, prospective payment refers to a method of paying hospitals or other health programs in which amounts or rates of payment are established in advance for the coming year, and the programs are paid these amounts regardless of the costs they actually incur. These systems of reimbursement are designed to introduce a degree of constraint on charge or cost increases by setting limits on amounts paid during a future period. Accordingly, hospitals incur at least some financial risk of their actual costs' exceeding the predetermined payment amounts. This is intended to provide hospitals with an incentive to reduce costs because reimbursement is predetermined. The basic features of the Medicare PPS provide that (1) all patients will be classified into 1 of 470 DRGs; (2) with the exception of a very limited number of "outlier" patients, the hospital will receive a fixed payment per DRG to cover inpatient operating costs (capital and direct medical education costs are reimbursed on a cost basis with recently legislated caps on annual increases); and (3) the payment received by a hospital will vary with area wages and urban or rural location. In addition, there is an indirect teaching adjustment which is based on the number of house staff per bed in the hospital. Excluded from the new system and reimbursed on a cost basis are (1) psychiatric, rehabilitation, long-term, and children's hospitals and (2) psychiatric and rehabilitation units in general hospitals. In addition, acute-care hospitals in Maryland and New Jersey are excluded because these States have alternative reimbursement programs under a waiver from Medicare.

Requirements:
The number of physicians needed to fulfill some predetermined standard for the amount of care needed or demanded. (See *Need, Demand,* and *Adjusted-Needs Based Model.*)

Residency Review Committee (RRC):
There is an RRC for each of 24 specialty areas. Each consists of representatives appointed by the American Medical Association, the appropriate specialty board (there are separate RRCs for psychiatry and neurology, which are under one board), and, in some cases, a national society. Some boards, and therefore some RRCs, are responsible for more than one specialty or subspecialty, so that there are a total of 31 specialties for which "general" certificates are awarded, and 50 subspecialties for which certificates of either "special" qualifications or "added" qualifications are awarded. Each RRC is a group of volunteer physicians in that specialty, which meets regularly to review information about individual training programs in the specialty to determine the programs' accreditation status. The accreditation function is a responsibility of the Accreditation Council for Graduate Medical Education, but is currently delegated to the RRC for each specialty area. (Grenholm, 1988)

Shortage (Economic):
A situation in which the quantity demanded exceeds the quantity supplied at the prevailing price.

Supply:
The number of physicians in a market area, usually at a given time.

Surplus (Economic):
A situation in which the quantity supplied exceeds the quantity demanded at the prevailing price.

Undergraduate Medical Education:
Medical education given before receipt of the M.D., D.O. or equivalent degree, usually the four years of study in medical, osteopathic, dental, or podiatric school leading to a degree. This use contrasts with that in general education, in which undergraduate refers to college education leading to the bachelor's degree.

Underrepresented Minority:

As defined by the Association of American Medical Colleges, using the population parity model, a group is considered underrepresented if the percentage of a specific racial/ethnic group in the physician population is less than that group's percentage in the total population. Thus, Blacks, Native Americans (American Indians, Eskimos, Aleuts), and Hispanics (specifically Mexican Americans and mainland Puerto Ricans) are currently considered "underrepresented" in the medical profession.

Visa Qualifying Examination:

This examination was developed in response to 1976 and 1977 amendments to the Immigration and Nationality Act. This examination was also one of the requirements for obtaining a visa to enter the United States for the purpose of participating in graduate medical education. This was a two-day examination which was developed and offered by the National Board of Medical Examiners and composed approximately equally of basic science and clinical science test items in their customary multiple-choice format. This examination was replaced by the Foreign Medical Graduate Examination in the Medical Sciences (FMGEMS) in 1984.

Weighted Average:

This is an average, usually of ratios, proportions, or percentages, that takes into account the varying sizes of the denominators of the items being averaged. For example, a simple average across States of physician-to-population ratios could be misleading if the ratios of larger States were not weighted according to the larger population. Hence, weighted averages are preferable in such cases. Technically, it is the sum obtained by multiplying factors, called weights, times the averages, or means, of two or more related variables. Each weight is proportional to the total number of observations, and the sum of the weights must equal one. (Anderson and Zelditch, 1975)

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